

EXHIBIT 28
[FILED UNDER SEAL]

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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS

SHERMAN DIVISION

THE STATE OF TEXAS,)
et al.,) CASE NO.
) 4:20-cv-00957-SD
Plaintiffs,)
)
vs.)
)
GOOGLE LLC,)
)
Defendant.)
_____)

Taken at 100 Madison Street
Missoula, Montana
Thursday, October 24, 2024 - 8:15 a.m.

*** CONFIDENTIAL ***
VIDEOTAPED DEPOSITION
OF
DR. JOHN CHANDLER, Ph.D.

Reported by Emily K. Niles, RMR, CRC, CRR, NV CCR #782;

Job No. CS6918917

Veritext Legal Solutions

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NUMBER		PAGE
Exhibit 1	June 7, 2024, Expert Report of Dr. John Chandler, Ph.D.	8
Exhibit 2	September 9, 2024, Expert Rebuttal Report of Dr. John Chandler, Ph.D.	112
Exhibit 3	Ad Exchange Auction Model; Bates Stamped GOOG-AT-MDL-C-000035250	185
Exhibit 4	Smarter Optimizations to Support a Healthier Programmatic Market; GOOG-AT-MDL-C-000086317 - 320	211

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1 THURSDAY, OCTOBER 24, 2024
2 THE VIDEOGRAPHER: Good morning. We are going
3 on the record at 9:15 a.m., October 24th, 2024.
4 Please note that this deposition will be
5 conducted both in-person and virtually. Quality of this
6 recording depends on the quality of camera, Internet
7 connection of participants. What is seen from the
8 witness and heard on the screen is what will be
9 recorded. Audio and video recording will continue to
10 take place unless all parties agree to go off the
11 record.
12 This is Media 1 of the recorded deposition of
13 John Chandler, taken by counsel Plaintiff in the matter
14 of State of Texas, et al., versus Google LLC, Case
15 No. 4:20-CV-00957-SDJ.
16 The location of this deposition is DoubleTree
17 by Hilton Missoula in Missoula, Montana, with attendance
18 over Zoom.
19 My name is Irelyn White representing Veritext.
20 I am the videographer. The court reporter is
21 Emily Niles from the firm Veritext.
22 I am not authorized to administer an oath. I
23 am not related to any party in this action, nor am I
24 financially interested in the outcome. If there are any
25 objections to proceeding, please state them at the time

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<p style="text-align: right;">Page 6</p> <p>1 of your appearance.</p> <p>2 Counsel and all present, including remotely,</p> <p>3 will now state their appearances and affiliations for</p> <p>4 the record, beginning with the noticing attorney.</p> <p>5 MR. ROSSON: Charles Rosson, Gibbs & Bruns for</p> <p>6 the Defendant.</p> <p>7 MR. RENARD: Jim Renard and Dewey Gonsoulin</p> <p>8 with Norton Rose Fulbright for the Plaintiffs and for</p> <p>9 the witness.</p> <p>10 And also for the record, the deposition is</p> <p>11 being taken at the instance of the Defendant, Google.</p> <p>12 THE VIDEOGRAPHER: Okay. Sorry.</p> <p>13 MR. RENARD: No problem.</p> <p>14 There will also be -- not in attendance yet</p> <p>15 but will be here is Mr. Zeke DeRose of The Lanier Law</p> <p>16 Firm, also representing the Plaintiffs and the witness.</p> <p>17 THE REPORTER: Do people online want to state</p> <p>18 who they are?</p> <p>19 MR. RENARD: I don't think it's necessary.</p> <p>20 THE VIDEOGRAPHER: All right.</p> <p>21 Will the court reporter please swear in the</p> <p>22 witness and then Counsel will proceed.</p> <p>23 Thereupon,</p> <p>24 JOHN CHANDLER,</p> <p>25 a witness of lawful age, having been first duly sworn to</p>	<p style="text-align: right;">Page 8</p> <p>1 A. I have identified a couple errors as I was</p> <p>2 reviewing my reports, which I can tell you.</p> <p>3 Q. Yes, please do.</p> <p>4 A. At my opening report, at the end of</p> <p>5 Paragraph 206, I would like to strike the last sentence,</p> <p>6 which was placed there in error. Par -- or Footnote 45</p> <p>7 is duplicated in the report.</p> <p>8 And there's some typos, one of which is in my</p> <p>9 Rebuttal Report. I have an erroneous paragraph mark. I</p> <p>10 think it is Paragraph 115 into 116.</p> <p>11 Q. The first of those you said was your opening</p> <p>12 report, Paragraph 206; is that right?</p> <p>13 A. Yes, that's correct.</p> <p>14 Q. And you referred to the last sentence?</p> <p>15 A. Yes, the one that gives the market share of</p> <p>16 DV360.</p> <p>17 Q. To make this easier, I'm going to mark your</p> <p>18 report so that you can have a copy.</p> <p>19 EXHIBITS:</p> <p>20 (Deposition Exhibit Number 1</p> <p>21 marked for identification.)</p> <p>22 MR. RENARD: Thank you.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. If you could look at Paragraph 206, please.</p> <p>25 THE REPORTER: What number is that?</p>
<p style="text-align: right;">Page 7</p> <p>1 tell the truth, the whole truth, and nothing but the</p> <p>2 truth, testified upon his oath as follows:</p> <p>3 EXAMINATION</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Good morning.</p> <p>6 A. Good morning.</p> <p>7 Q. Do you understand you're under oath?</p> <p>8 A. I do.</p> <p>9 Q. Your opinions for this case are stated in your</p> <p>10 expert reports; is that right?</p> <p>11 A. That's correct.</p> <p>12 Q. You have two expert reports; is that correct?</p> <p>13 A. Yes, I have two expert reports in this case.</p> <p>14 Q. The first one is your opening report and then</p> <p>15 you also have a rebuttal, right?</p> <p>16 A. Yes, that's correct.</p> <p>17 Q. Okay.</p> <p>18 Are you offering any opinions that are not</p> <p>19 stated in your expert reports?</p> <p>20 A. I am not.</p> <p>21 Q. Have any of your opinions changed since you</p> <p>22 issued your reports?</p> <p>23 A. They have not.</p> <p>24 Q. Have you identified any errors in your expert</p> <p>25 reports?</p>	<p style="text-align: right;">Page 9</p> <p>1 MR. ROSSON: That's Chandler Exhibit 1.</p> <p>2 THE WITNESS: I'm there.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. And the last sentence, if I'm getting it right</p> <p>5 is, "Currently Google's advertiser ad buying tool,</p> <p>6 DV360, which is what DoubleClick for Advertisers became,</p> <p>7 [REDACTED]."</p> <p>8 Is that right?</p> <p>9 A. Yes, that's correct.</p> <p>10 Q. And that is no longer your opinion?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I would like to remove that</p> <p>13 sentence and the accompanying footnote.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Okay.</p> <p>16 Do you have the opinion that currently</p> <p>17 Google's advertiser -- ad buying tool DV360, which is</p> <p>18 what DoubleClick for Advertisers became, has a</p> <p>19 [REDACTED]</p> <p>20 A. I do not.</p> <p>21 Q. Okay.</p> <p>22 Can you tell me why that is not your opinion?</p> <p>23 MR. RENARD: Objection to form.</p> <p>24 THE WITNESS: I was unable to substantiate</p> <p>25 that number, the number giving the market share, other</p>

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<p style="text-align: right;">Page 10</p> <p>1 than estimates from deposition testimony, and so I would</p> <p>2 like to remove it since I do not have an external</p> <p>3 foundation for it.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. All right.</p> <p>6 Do you have an opinion on DV360's market</p> <p>7 share?</p> <p>8 A. I have opinions relating to DV360's place in</p> <p>9 the display advertising marketplace but not a specific</p> <p>10 market share number.</p> <p>11 Q. Got it. To make sure I understand, you're not</p> <p>12 offering an opinion that's a quantum, a percentage of</p> <p>13 DV360's market share; is that right?</p> <p>14 A. That's correct.</p> <p>15 Q. Okay.</p> <p>16 Now, I want to make sure I understand your --</p> <p>17 the other corrections you mentioned. You mentioned a</p> <p>18 Footnote 45; is that right?</p> <p>19 A. That's correct. And --</p> <p>20 Q. And was that in your opening report or your</p> <p>21 rebuttal?</p> <p>22 A. In the opening report on Page 32.</p> <p>23 Q. I see. It's a double footnote; is that right?</p> <p>24 A. That's correct.</p> <p>25 Q. Okay.</p>	<p style="text-align: right;">Page 12</p> <p>1 to you by counsel?</p> <p>2 A. The only instructions I've received from</p> <p>3 counsel relate to my assignment.</p> <p>4 Q. And what about instructions from anyone other</p> <p>5 than counsel?</p> <p>6 A. There are no instructions from anyone other</p> <p>7 than counsel.</p> <p>8 Q. All right. So the only part of your opinions</p> <p>9 that are dependent on an instruction from counsel would</p> <p>10 be that you received the assignment; is that right?</p> <p>11 A. That's correct.</p> <p>12 Q. All right.</p> <p>13 Are you an economist?</p> <p>14 A. I am not.</p> <p>15 Q. Are you an expert in ethics?</p> <p>16 A. I am an expert in ethics as it relates to</p> <p>17 marketing because of my marketing expertise, and there</p> <p>18 are certainly ethical concepts within data science and</p> <p>19 statistics that I consider myself an expert in.</p> <p>20 Q. Have you ever taught a course on business</p> <p>21 ethics?</p> <p>22 A. No.</p> <p>23 Q. Published any papers that concern ethics?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I have not published any</p>
<p style="text-align: right;">Page 11</p> <p>1 Any other non-typographical changes to your</p> <p>2 opinions?</p> <p>3 A. I don't believe so.</p> <p>4 Q. Okay. Thank you.</p> <p>5 You're serving as an expert for the plaintiffs</p> <p>6 in this lawsuit; is that correct?</p> <p>7 A. That's correct.</p> <p>8 Q. And can we agree that when we talk about the</p> <p>9 plaintiffs in the lawsuit, we can call them "the</p> <p>10 states"?</p> <p>11 A. Yes.</p> <p>12 Q. Okay. And Puerto Rico is not a state, but for</p> <p>13 simplicity, can we agree that when we refer to the</p> <p>14 states, we're also referring today to Puerto Rico?</p> <p>15 A. Yes, and Kentucky I believe is a commonwealth,</p> <p>16 but "states" is fine.</p> <p>17 Q. Got it. "The states" will be the plaintiffs,</p> <p>18 fair?</p> <p>19 A. That's fair.</p> <p>20 Q. All right.</p> <p>21 Are you relying on any assumptions provided to</p> <p>22 you by anyone?</p> <p>23 A. I am not relying on any assumptions provided</p> <p>24 to me by anyone.</p> <p>25 Q. Are you relying on any instructions provided</p>	<p style="text-align: right;">Page 13</p> <p>1 academic papers that concerned ethics.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. What about other papers?</p> <p>4 A. I have published white papers that touch on</p> <p>5 ethical concepts.</p> <p>6 Q. When you say "touch on ethical concepts," what</p> <p>7 do you mean?</p> <p>8 A. I mean concepts such as marketplace</p> <p>9 participation by advertisers and publishers.</p> <p>10 Q. Have you ever taken an ethics course?</p> <p>11 A. I have not.</p> <p>12 Q. You work for a private company, Data Insights,</p> <p>13 in addition to being a professor; is that right?</p> <p>14 A. That's correct. In addition to being a</p> <p>15 professor at the University of Montana, I have a data</p> <p>16 science consulting company that I founded.</p> <p>17 Q. Do people hire you for ethics advice?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: Not specifically for ethics</p> <p>20 advice.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. Have people ever hired you for ethics advice?</p> <p>23 MR. RENARD: Same objection.</p> <p>24 THE WITNESS: My clients have asked for my</p> <p>25 ethical opinions as part of my consulting work.</p>

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<p style="text-align: right;">Page 14</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Would you say you have specialized skills in</p> <p>3 the field of business ethics?</p> <p>4 A. As it relates to digital marketing and</p> <p>5 marketing generally, I would say yes.</p> <p>6 Q. Are you a survey expert?</p> <p>7 A. Yes.</p> <p>8 Q. Are you an expert on what is fair?</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: In certain fields, such as</p> <p>11 digital marketing, I consider myself an expert on what</p> <p>12 is fair.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. Would you say you have specialized knowledge</p> <p>15 about what is fair in digital marketing?</p> <p>16 A. Yes.</p> <p>17 Q. Are you an expert in transparency?</p> <p>18 A. Again, as it relates to digital marketing,</p> <p>19 yes.</p> <p>20 Q. And same questions. Have you ever taught a</p> <p>21 university course on fairness?</p> <p>22 MR. RENARD: Objection to form.</p> <p>23 THE WITNESS: I have taught university courses</p> <p>24 that deal with fairness as it relates to research.</p> <p>25</p>	<p style="text-align: right;">Page 16</p> <p>1 A. I did not.</p> <p>2 Q. What about other industry sources of what is</p> <p>3 ethical and fair? Did you rely on any industry sources</p> <p>4 of what is ethical and fair in offering your opinions in</p> <p>5 this case?</p> <p>6 A. In terms of articles and like the popular</p> <p>7 press, I don't believe I am relying on those for my</p> <p>8 estimates of what is ethical and fair. There are places</p> <p>9 where I am relying on deposition testimony by industry</p> <p>10 participants.</p> <p>11 Q. So setting aside deposition testimony in this</p> <p>12 case and popular press, are you relying on any other</p> <p>13 written material for your opinion as to what is fair or</p> <p>14 transparent?</p> <p>15 A. I don't believe so, but I would be happy to</p> <p>16 refer to my report.</p> <p>17 Q. That's fair.</p> <p>18 Are you an expert in online auction mechanics?</p> <p>19 A. Yes.</p> <p>20 Q. Are you an expert in online auction design?</p> <p>21 A. Can you tell me what you mean by "design"</p> <p>22 here?</p> <p>23 Q. Yes. I mean expertise in the creation of an</p> <p>24 online auction system.</p> <p>25 A. Yes.</p>
<p style="text-align: right;">Page 15</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. What do you mean by that?</p> <p>3 A. As part of qualitative and quantitative</p> <p>4 research on human subjects, we undergo institutional</p> <p>5 review board process and fairness and transparency as</p> <p>6 part of that process.</p> <p>7 Q. I see.</p> <p>8 Are you talking about research where the</p> <p>9 subjects of the research would be human beings?</p> <p>10 A. Yes, that's correct.</p> <p>11 Q. Okay. What about other than that?</p> <p>12 MR. RENARD: Objection to form.</p> <p>13 THE WITNESS: Some of my classes deal with</p> <p>14 interactions between different business entities, and</p> <p>15 those classes again touch on issues of fairness and</p> <p>16 transparency in the business dealings between firms.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. And when you're discussing fairness and</p> <p>19 transparency with your students, where do you draw your</p> <p>20 own knowledge so that you can teach them?</p> <p>21 A. Typically from entities like the American</p> <p>22 Marketing Association which publishes a code of ethics.</p> <p>23 Q. Did you rely on the American Marketing</p> <p>24 Association code of ethics in offering your opinions in</p> <p>25 this case?</p>	<p style="text-align: right;">Page 17</p> <p>1 Q. Have you ever been engaged to help set auction</p> <p>2 rules?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: I have advised on the creation</p> <p>5 of auction rules as part of my work at Microsoft.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. And in that instance, were you advising the</p> <p>8 exchange owner?</p> <p>9 A. Yes, the firm that ran the exchange.</p> <p>10 Q. Okay. Who was that firm?</p> <p>11 A. At the time it was called AppNexus.</p> <p>12 Q. So you have advised AppNexus in the past; is</p> <p>13 that correct?</p> <p>14 A. As part of AppNexus's relationship with</p> <p>15 Microsoft, I provided advice to AppNexus.</p> <p>16 Q. Okay.</p> <p>17 Can you just give me a thumbnail of the</p> <p>18 subject matter you were advising on?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: I would say the subject matter I</p> <p>21 was advising on was related to what we internally called</p> <p>22 the matching problem determining winning bids in an</p> <p>23 option environment.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. As part of that work, were you providing</p>

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<p style="text-align: right;">Page 18</p> <p>1 advice about what would be fair?</p> <p>2 A. As part of that work, I was providing advice</p> <p>3 about disclosure of auction rules.</p> <p>4 Q. Okay. And providing -- when you were</p> <p>5 providing advice of disclosure of auction rules, were</p> <p>6 you offering advice about what would be fair to disclose</p> <p>7 versus what would not be fair to disclose?</p> <p>8 A. Yes, I think that's a fair characterization of</p> <p>9 the type of advice.</p> <p>10 Q. Excuse me.</p> <p>11 Are you an expert in algorithm design?</p> <p>12 A. Yes.</p> <p>13 Q. Are you an expert in data analysis?</p> <p>14 A. Yes.</p> <p>15 Q. Are you an expert in forestry?</p> <p>16 A. I collaborate with members of the Forestry</p> <p>17 college here on campus, Forestry and Conservation. So I</p> <p>18 have expertise in that area, but I would say in a legal</p> <p>19 sense of helping a finder of fact gather information</p> <p>20 about the social science aspects of forestry and</p> <p>21 conservation, then yes.</p> <p>22 Q. Are there any other fields that you consider</p> <p>23 yourself an expert in that I have not mentioned?</p> <p>24 A. I consider myself an expert in statistics. I</p> <p>25 consider myself an expert in marketing and digital</p>	<p style="text-align: right;">Page 20</p> <p>1 A. We formed a division that provided services</p> <p>2 for publishers. AQuantive had several divisions during</p> <p>3 the time I worked there.</p> <p>4 Q. Okay.</p> <p>5 And when aQuantive formed its division to</p> <p>6 advise publishers, did its work in advising agencies and</p> <p>7 advertisers continue or did it cease?</p> <p>8 A. The work advising agencies and advertisers</p> <p>9 continued.</p> <p>10 Q. So aQuantive was advising agencies and</p> <p>11 advertisers and publishers at the same time; is that</p> <p>12 right?</p> <p>13 A. Yes, that's correct.</p> <p>14 Q. Okay.</p> <p>15 What proportion of your career has been spent</p> <p>16 working with advertisers as compared to publishers?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: For the portion of my career</p> <p>19 related to marketing, I would say that roughly</p> <p>20 50 percent of the time has been spent on the agency and</p> <p>21 advertiser side. Roughly 20 percent of the time has</p> <p>22 been spent on the publisher, or sell side, and the</p> <p>23 remaining 30 percent was working on technologies that</p> <p>24 may have spanned multiple entities or might not fit that</p> <p>25 description.</p>
<p style="text-align: right;">Page 19</p> <p>1 marketing.</p> <p>2 And nothing else pops to mind.</p> <p>3 Q. All right.</p> <p>4 I'm going to ask you about your prior work</p> <p>5 experience a little bit. You're going to have to help</p> <p>6 me with the words so I don't mispronounce it.</p> <p>7 Am I pronouncing aQuantive correctly?</p> <p>8 A. That was perfect.</p> <p>9 Q. Thank you.</p> <p>10 You were with aQuantive from 1999 to 2007; is</p> <p>11 that right?</p> <p>12 A. That's correct.</p> <p>13 Q. And you were a data scientist there; is that</p> <p>14 correct?</p> <p>15 A. My titles varied, but I think "data scientist"</p> <p>16 would describe all the work I did there.</p> <p>17 Q. Did you ever have a client-facing role?</p> <p>18 A. Yes, almost all of my roles were partially</p> <p>19 client facing.</p> <p>20 Q. And were clients of aQuantive advertisers?</p> <p>21 A. Initially the clients of aQuantive were</p> <p>22 agencies and advertisers. We then developed a line of</p> <p>23 business where the clients were publishers.</p> <p>24 Q. So aQuantive was providing services to both</p> <p>25 agencies and advertisers and publishers; is that right?</p>	<p style="text-align: right;">Page 21</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Just to orient you, I'm looking at Paragraph 6</p> <p>3 of your opening report. You describe how you were the</p> <p>4 first analyst to work on DrivePM and had shared</p> <p>5 responsibility for developing algorithms generating tens</p> <p>6 of millions of dollars in profit; is that right?</p> <p>7 A. That's correct.</p> <p>8 Q. And would you describe this algorithm as an ad</p> <p>9 buying tool?</p> <p>10 A. The work at DrivePM, I would describe as an</p> <p>11 advertising network primarily and in the modern</p> <p>12 marketing taxonomy would be the forbearer of a supply</p> <p>13 side platform or SSP.</p> <p>14 Q. Was DrivePM trading on its own account, or was</p> <p>15 it offering software to its clients?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: DrivePM acquired inventory in</p> <p>18 several different ways. Some through revenue sharing</p> <p>19 agreements, some through more direct arbitrage type</p> <p>20 arrangements where we would purchase inventory.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. How did the algorithms that you mention in</p> <p>23 Paragraph 6 of your opening report generate profit?</p> <p>24 A. The business of DrivePM was a business of</p> <p>25 aligning inventory that was available for sale with</p>

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<p>1 entities who were interested in buying that inventory, 2 and I worked on optimization algorithms to facilitate 3 those matches and created profit by taking a technology 4 fee on the transactions that were executed. 5 Q. So when transactions were executed, DrivePM 6 would take a technology fee. Do I have that right? 7 A. Yes, similar to an ad serving fee. 8 Q. Do you agree that in the marketing world data 9 is a valuable asset? 10 A. Yes, I do agree with that. 11 Q. Do you agree that algorithms are a valuable 12 asset? 13 A. Yes, I think it is somewhat difficult to speak 14 about these things in complete generality, but in broad 15 strokes, algorithms are valuable. 16 Q. Is it true in your experience that companies 17 don't tend to give away their data or algorithms to the 18 public? 19 MR. RENARD: Objection to form. 20 THE WITNESS: I think that is a question that 21 probably deserves specific analysis for a given 22 scenario. When we talk about giving away algorithms or 23 data to the public, what I am thinking about is 24 releasing consumer information back to consumers or 25 developed intellectual property to other software</p>	<p>1 DrivePM to be an algorithm that helps match inventory 2 with bidders; is that right? 3 A. I would maybe restate it to say match 4 publisher inventory with advertisers who wanted to buy 5 that. It was not an auction in the same sense that an 6 entity like AppNexus or AdX was. 7 Q. Did you ever share the DrivePM source code 8 with bidders who desired to acquire publisher inventory? 9 A. We did -- 10 MR. RENARD: Objection to form. 11 THE WITNESS: We did not share the source 12 code; we shared the parameters that we used to perform 13 the optimization with both advertisers and publishers in 14 an effort to encourage them to include information in 15 our system that would allow us to match -- or if the 16 publisher's inventory or place more ads on behalf of the 17 advertiser. 18 BY MR. ROSSON: 19 Q. Who did you share the source code with? 20 MR. RENARD: Objection to form. 21 THE WITNESS: The source code remained 22 internal, a trade secret. 23 BY MR. ROSSON: 24 Q. Would you say that DrivePM source code gave it 25 a competitive advantage?</p>
Page 23	Page 25
<p>1 developers, and I think that -- I can think of many 2 examples where that happens. 3 BY MR. ROSSON: 4 Q. Is it true in your experience that companies 5 don't tend to give away data or algorithms for free? 6 A. I think it really varies. One example I might 7 offer is ChatGPT is very famous right now. The "T" in 8 ChatGPT stands for "transformer," which was a technology 9 or algorithm that was developed within Google and 10 released for free. 11 Q. What about in the marketing world? 12 MR. RENARD: Objection to form. 13 THE WITNESS: I'm not exactly sure what you 14 mean by release a marketing algorithm for free. 15 BY MR. ROSSON: 16 Q. Let me do an example. 17 Did you ever share the DrivePM algorithms with 18 your competitors? 19 A. We did not share the internal workings of 20 DrivePM with competitors. 21 Q. Did you ever share the DrivePM algorithms with 22 other bidders? 23 A. I'm not sure what you mean by "other bidders" 24 in this context. 25 Q. Well, correct me if I'm wrong, I understood</p>	<p>1 MR. RENARD: Objection to form. 2 THE WITNESS: I think the source code of 3 DrivePM was part of our competitive advantage. 4 BY MR. ROSSON: 5 Q. And was DrivePM engaging in arbitrage? 6 A. DrivePM was engaging in arbitrage on the sell 7 side, where we were purchasing inventory from some 8 publishers and then reselling that inventory. 9 Q. So publishers would sell inventory to DrivePM 10 which would then sell that inventory to other parties; 11 is that right? 12 A. Yes, some of our inventory came in that way. 13 Q. Do you ever remembering -- remember asking 14 yourself if that practice of DrivePM was ethical? 15 MR. RENARD: Objection to form. 16 THE WITNESS: Yes. 17 BY MR. ROSSON: 18 Q. Did you conclude that it was ethical? 19 A. Yes, I concluded that our participation in the 20 advertising ecosystem via DrivePM was ethical. 21 Q. How did you make that decision? 22 A. I evaluated the extent to which we were being 23 fair with the companies we were working with and whether 24 or not we were unfairly disadvantaging certain 25 participants over others.</p>

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<p style="text-align: right;">Page 26</p> <p>1 Q. Which participants?</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: Well, I was evaluating whether</p> <p>4 or not we were unfairly advantaging any particular</p> <p>5 advertisers over others and also any publishers over</p> <p>6 others. And this was a topic at aQuantive that was very</p> <p>7 sensitive for us because we also owned an advertising</p> <p>8 agency called Avenue A, then called Avenue A/Razorfish,</p> <p>9 then called Razorfish. That gave us in the marketplace</p> <p>10 a potential line of attack by our competitors that we</p> <p>11 were unfairly treating our internal agency over external</p> <p>12 agencies. So we were, both at Atlas and at DrivePM,</p> <p>13 extremely sensitive to appearance of impropriety or</p> <p>14 unfair dealing.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. DrivePM's source code gave it an advantage</p> <p>17 over its competitors, right?</p> <p>18 MR. RENARD: Objection. Form.</p> <p>19 THE WITNESS: I think so. I think that our</p> <p>20 source code gave us an advantage over other ad networks.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. And that put DrivePM in an unequal position</p> <p>23 with other ad networks, right?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I'm not sure what you mean by</p>	<p style="text-align: right;">Page 28</p> <p>1 me retract that and just orient you.</p> <p>2 I'm still on Paragraph 6 of your opening</p> <p>3 report, and I'm looking at a sentence that says, "The</p> <p>4 creation of DrivePM presaged the programmatic display</p> <p>5 revolution," and then it continues.</p> <p>6 Do you see that sentence?</p> <p>7 A. I do.</p> <p>8 Q. Is it true that all of your work at aQuantive</p> <p>9 predated the era of programmatic advertising?</p> <p>10 A. My work at aQuantive predated the era of</p> <p>11 programmatic advertising when we were required by</p> <p>12 Microsoft. I was working on programmatic.</p> <p>13 Q. All right. So your aQuantive time was prior</p> <p>14 to the programmatic era and your Microsoft time was</p> <p>15 during the programmatic era; is that right?</p> <p>16 A. My Microsoft time was at the beginning of the</p> <p>17 programmatic error -- era.</p> <p>18 Q. Okay.</p> <p>19 A. Apologies.</p> <p>20 Q. Am I otherwise correct on the division?</p> <p>21 A. Yes. AQuantive was acquired before large-</p> <p>22 scale programmatic. We worked with Right Media,</p> <p>23 R-i-g-h-t, that was doing some programmatic work, but at</p> <p>24 aQuantive we were not engaged in programmatic other than</p> <p>25 analyzing those sort of early days of programmatic.</p>
<p style="text-align: right;">Page 27</p> <p>1 "unequal" here.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. I mean an advantage that DrivePM had developed</p> <p>4 source code that it believed worked better.</p> <p>5 MR. RENARD: Same objection.</p> <p>6 THE WITNESS: In the sense that we felt like</p> <p>7 we were doing a better job matching advertisers and</p> <p>8 publishers, that gave us a competitive advantage</p> <p>9 relative to other advertising networks.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Did you consider the ethics of having a</p> <p>12 competitive advantage over other ad networks through</p> <p>13 DrivePM making a better product?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: No. I think we considered that</p> <p>16 aspect of the business competition in the marketplace.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. And to put the question bluntly, do you</p> <p>19 believe that competition in the marketplace is</p> <p>20 unethical?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: I do not believe that</p> <p>23 competition in the marketplace is unethical.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Your work at aQuantive predated -- well, let</p>	<p style="text-align: right;">Page 29</p> <p>1 Q. Thank you.</p> <p>2 While you were at aQuantive, was DoubleClick</p> <p>3 aQuantive's primary competitor?</p> <p>4 A. Yes. There was -- there were one or two other</p> <p>5 competitors in the market: ValueClick, a company called</p> <p>6 BlueKai, B-l-u-e-K-a-i. But DoubleClick was our primary</p> <p>7 competitor.</p> <p>8 Q. And aQuantive was acquired by Microsoft; is</p> <p>9 that correct?</p> <p>10 A. That's correct.</p> <p>11 Q. Microsoft lost a lot of money on that</p> <p>12 transaction; is that right?</p> <p>13 A. Yes. Those kinds of accounting evaluations</p> <p>14 happened well above my level, but I know that Microsoft</p> <p>15 wrote down a substantial portion of its aQuantive</p> <p>16 acquisition.</p> <p>17 Q. \$6.2 billion; is that right?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: \$6.2 billion was the price of</p> <p>20 the acquisition. Then the agency portion of the</p> <p>21 business was sold to Publicis, and so my impression was</p> <p>22 that the write-down was for the Atlas portion of the</p> <p>23 acquisition and was less than 6 billion, but I could be</p> <p>24 wrong.</p> <p>25</p>

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<p>1 BY MR. ROSSON:</p> <p>2 Q. All right. Your answer may have corrected me</p> <p>3 on this, but I'm just going to have to ask you again to</p> <p>4 make sure I understand.</p> <p>5 Did Microsoft shut down aQuantive?</p> <p>6 A. Not exactly.</p> <p>7 Q. Can you ex- -- correct me on how Microsoft</p> <p>8 ingested aQuantive?</p> <p>9 A. "Ingested" is the perfect word.</p> <p>10 After the acquisition, Microsoft sold the</p> <p>11 agency division, which I believe at the time was called</p> <p>12 Avenue A/Razorfish. Then DrivePM was absorbed into</p> <p>13 essentially MSN, and the Atlas assets were folded into</p> <p>14 Microsoft's advertiser and publisher solutions group.</p> <p>15 Q. Thank you.</p> <p>16 So now moving to the Microsoft era for when</p> <p>17 you worked there. Was that 2007 to 2011?</p> <p>18 A. Yes, I believe that my -- the end of my time</p> <p>19 at Microsoft was maybe March of 2012.</p> <p>20 Q. Did you have a client-facing role at</p> <p>21 Microsoft?</p> <p>22 A. Yes, although less client facing than at</p> <p>23 aQuantive.</p> <p>24 Q. What do you mean by that?</p> <p>25 A. Much of my work at Microsoft was focused more</p>	<p>1 BY MR. ROSSON:</p> <p>2 Q. Why didn't you share the source code?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: That was Microsoft's policy.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. Did you have an ethical issue with the policy?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I did not have an ethical</p> <p>9 objection to Microsoft's decision to not release its</p> <p>10 source code to customers or competitors.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Have you ever worked directly for an online ad</p> <p>13 exchange?</p> <p>14 A. I've never been employed by an online ad</p> <p>15 exchange.</p> <p>16 Q. Have you ever had a role where you were</p> <p>17 responsible for helping an online ad exchange run its</p> <p>18 business?</p> <p>19 A. As I mentioned --</p> <p>20 MR. RENARD: Objection to form.</p> <p>21 THE WITNESS: As I mentioned earlier, as part</p> <p>22 of the work at Microsoft, I provided advice to AppNexus</p> <p>23 and Ad Exchange.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. We talked about how aQuantive was providing</p>
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<p>1 on internal tools and algorithms, and so I met with</p> <p>2 agencies and advertisers, met with publishers, met with</p> <p>3 exchanges, and so those were all client facing. I</p> <p>4 believe that Microsoft considered all of them clients.</p> <p>5 And then in my final role at Microsoft which</p> <p>6 was research director at Microsoft TV, I interacted with</p> <p>7 clients directly quite a bit.</p> <p>8 Q. Did you work with source code while you were</p> <p>9 at Microsoft?</p> <p>10 A. Yes.</p> <p>11 Q. Did you share it with Microsoft's competitors?</p> <p>12 A. No.</p> <p>13 Q. Did you share it with Microsoft's customers?</p> <p>14 MR. RENARD: Dr. Chandler, one thing I would</p> <p>15 just caution you, to the extent that any of these</p> <p>16 questions with respect to your involvement at -- within</p> <p>17 firms within the industry, implicate matters of</p> <p>18 contractual confidentiality or obligations that you</p> <p>19 might have with respect to the nondisclosure of</p> <p>20 information, that you point that out to counsel and then</p> <p>21 we'll take it from there.</p> <p>22 THE WITNESS: Understood.</p> <p>23 I think I can say that, that we did not share</p> <p>24 source code with our customers; we did share information</p> <p>25 about source code.</p>	<p>1 services to advertisers and publishers. Do you remember</p> <p>2 that?</p> <p>3 A. Yes.</p> <p>4 Q. Do you believe that was a conflict of interest</p> <p>5 for aQuantive?</p> <p>6 A. I believe that it created potential conflicts</p> <p>7 of interest, and so we were extremely careful to</p> <p>8 separate those parts of the business and attempted to</p> <p>9 ensure that work done on the advertiser side of the</p> <p>10 business was not informed by work done on the publisher</p> <p>11 side of the business and vice versa.</p> <p>12 Q. Do you believe that aQuantive had an actual as</p> <p>13 opposed to potential conflict of interest?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: I believe that we did a good job</p> <p>16 separating those lines of business.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Do you believe separating the lines of</p> <p>19 business was sufficient such that aQuantive did not have</p> <p>20 a conflict of interest?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: I believe that to be true.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Okay.</p> <p>25 Do you believe that aQuantive had an inherent</p>

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<p>Page 34</p> <p>1 conflict of interest by providing services to publishers 2 and advertisers at the same time? 3 MR. RENARD: Same objection. 4 THE WITNESS: I would say that there was an 5 inherent potential for conflict of interest that we 6 worked hard to avoid. 7 BY MR. ROSSON: 8 Q. Are you distinguishing between an inherent 9 conflict of interest and an inherent potential for 10 conflict of interest? 11 MR. RENARD: Same objection. 12 THE WITNESS: Yes. 13 BY MR. ROSSON: 14 Q. Can you explain the distinction to me, please. 15 A. I think our relationships on the buy and sell 16 side created an inherent potential conflict of interest 17 which we took measures to prevent becoming a realized 18 conflict of interest. 19 Q. You agree there's a difference between the 20 potential conflict of interest and a realized conflict 21 of interest? 22 MR. RENARD: Objection to form. 23 THE WITNESS: Yes. 24 BY MR. ROSSON: 25 Q. And you believe that aQuantive did not have a</p>	<p>Page 35</p> <p>1 realized conflict of interest by providing services to 2 both advertisers and publishers; is that correct? 3 A. I think based on the measures we took to 4 ensure separation and the nature of our business where 5 the way in which our publisher side of the business was 6 organized, I think, prevented a realized conflict of 7 interest. 8 Q. You worked for a company called Data Insights; 9 is that right? 10 A. Yes. Data Insights is my consulting business. 11 Q. Are you the founder? 12 A. Yes. 13 Q. And is your title managing director? 14 A. I think "managing partner" might be what I put 15 on my resumé, but... 16 Q. And what are your responsibilities for 17 Data Insights? 18 MR. RENARD: Objection to form. 19 BY MR. ROSSON: 20 Q. Let me clarify that. 21 What are your job responsibilities at 22 Data Insights? 23 A. They are the full range of jobs that you might 24 expect for someone at a small consulting business. I do 25 everything from payroll and accounting, to negotiating</p>	<p>Page 36</p> <p>1 client agreements, to carrying out our consulting work. 2 Q. How many employees does Data Insights have? 3 A. We have four people who are full-time with us, 4 and I would say around 15 people who are part-time. 5 Q. Do you consider Data Insights a major player 6 in the online advertising industry? 7 A. I do not. 8 Q. Does Data Insights have publisher clients? 9 A. We have had publisher clients in the past. 10 Q. Does Data Insights currently have publisher 11 clients? 12 A. No, I do not believe we do. 13 Q. When was the last time Data Insights had a 14 publisher client? 15 A. Right before the pandemic. 16 Q. And I expect Data Insights has advertiser 17 clients; is that correct? 18 A. That's correct. 19 Q. Okay. 20 Can you give me a breakdown, an estimate of 21 the percentage of work Data Insights does on the 22 publisher side versus the advertiser side? 23 MR. RENARD: Objection to form. 24 THE WITNESS: I would say, again, probably 25 about half is on the advertiser or agency or buy side,</p>	<p>Page 37</p> <p>1 about 30 to 35 percent would be technology companies in 2 the space that operate in a variety of ways. Some are 3 purely on the buy side, some are on the sell side, and 4 then the remainder would be publishers for our marketing 5 business. 6 BY MR. ROSSON: 7 Q. About how many hours a week do you work for 8 Data Insights? And I'll back up. 9 To be transparent, I'm trying to get a 10 breakdown between your professor hat and your private 11 sector hat. 12 So here's my question: About what percentage 13 of your time in a week is spent working for 14 Data Insights? 15 A. My teaching and academic responsibilities vary 16 quite a bit throughout the year. If we look at it on an 17 annual basis, I spend about 1,000 hours a year on my 18 academic responsibilities and more like 1,800 hours a 19 year on my Data Insights responsibilities. 20 Q. Has that breakdown been true since 2015? 21 A. In broad terms. 22 Q. You charge your Data Insights clients \$750 an 23 hour; is that right? 24 A. That is my expert witness rate. That is not 25 the rate I charge for other projects.</p>
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<p>1 Q. So your expert rate in this case is different</p> <p>2 from your private sector rate?</p> <p>3 A. Yes. If I was developing algorithms or doing</p> <p>4 data analysis, I charge a different rate.</p> <p>5 Q. What is that rate?</p> <p>6 A. It varies by client, but typically it's around</p> <p>7 \$350 an hour.</p> <p>8 Q. Has a company ever engaged Data Insights to</p> <p>9 design an auction for them?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: We have never been engaged</p> <p>12 purely to design an auction; we have been engaged to</p> <p>13 advise companies that were running auctions or</p> <p>14 participating in auctions.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. In terms of building an online ad exchange</p> <p>17 from the ground up, has a company ever reached out and</p> <p>18 asked Data Insights to help with that?</p> <p>19 A. No.</p> <p>20 Q. In any of your jobs, did you have a</p> <p>21 responsibility for mergers and acquisitions?</p> <p>22 A. In my jobs I had responsibilities, shared</p> <p>23 responsibilities that dealt with mergers and</p> <p>24 acquisitions. So some of our clients are small startups</p> <p>25 who may be interested in being acquired. And so I have</p>	<p>1 regulation that you'd consider yourself an expert in?</p> <p>2 A. No.</p> <p>3 Q. Okay.</p> <p>4 Have you ever been called on to advise on</p> <p>5 whether a merger was allowable under the antitrust laws?</p> <p>6 A. No.</p> <p>7 Q. Under any competition law?</p> <p>8 MR. RENARD: Objection to form.</p> <p>9 THE WITNESS: Certainly I was not the person</p> <p>10 making the decision. I have offered an opinion on that</p> <p>11 in a -- as a consultant.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. On whether a merger or acquisition was</p> <p>14 permitted by competition laws?</p> <p>15 A. I would reframe it slightly to say whether or</p> <p>16 not market participants would view an acquisition as</p> <p>17 anticompetitive. But, again, I'm speaking from the</p> <p>18 perspective of a digital marketing expert, not an</p> <p>19 economist and not someone who is a legal expert.</p> <p>20 Q. Have you ever been called on to decide whether</p> <p>21 a merger would make a company dominant in an industry?</p> <p>22 A. I have not.</p> <p>23 Q. In any of your jobs or any of your job</p> <p>24 experience, have you ever seen the government demand</p> <p>25 that a company help its competitors?</p>
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<p>1 worked on mergers and acquisitions from the being-</p> <p>2 acquired side. I have also worked with large companies</p> <p>3 who were interested in acquiring or merging with other</p> <p>4 companies.</p> <p>5 Q. In that part of your work, the mergers and</p> <p>6 acquisitions, is any part of that work making a</p> <p>7 determination on whether a merger or acquisition would</p> <p>8 be fair?</p> <p>9 A. I have occasionally weighed in on things like</p> <p>10 regulatory concerns, but I don't recall specifically</p> <p>11 weighing in on fairness as a standalone question.</p> <p>12 Q. And here for this question by "fairness," I</p> <p>13 mean your personal sense of ethics. Have you ever been</p> <p>14 asked to give your ethical opinion on whether a merger</p> <p>15 is ethical or not?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: As part of my work at</p> <p>18 Data Insights, I don't believe I have.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. Okay.</p> <p>21 You mentioned regulatory considerations; is</p> <p>22 that right?</p> <p>23 A. Yes.</p> <p>24 Q. Okay.</p> <p>25 Is there an area of federal or state</p>	<p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: Can you say that again for me?</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Drawing on all your job experience, do you</p> <p>5 remember a time when a government entity came in and</p> <p>6 demanded that a company help its competitors?</p> <p>7 MR. RENARD: Same objection.</p> <p>8 THE WITNESS: And when you say -- I mean, are</p> <p>9 these things that I have like observed or things I have</p> <p>10 participated in as an employee or consulted?</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. First, let's go with observed.</p> <p>13 A. Certainly I have, living in Seattle in the</p> <p>14 late '90s, seen the antitrust decisions against</p> <p>15 Microsoft. I observed the decoupling of operating</p> <p>16 systems and browsers in a way that I think would help a</p> <p>17 company like Firefox or Google with the Chrome browser.</p> <p>18 So that kind of thing.</p> <p>19 Q. All right.</p> <p>20 And then, first of all, do any other examples</p> <p>21 come to mind?</p> <p>22 A. Recently the Epic Games lawsuit against Apple.</p> <p>23 Q. Any other examples?</p> <p>24 A. As I sit here right now, those are the only</p> <p>25 two that come to mind.</p>

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<p style="text-align: right;">Page 42</p> <p>1 Q. And so for the examples that you provided,</p> <p>2 were you personally involved in any of those actions?</p> <p>3 A. No.</p> <p>4 Q. All right.</p> <p>5 You are a clinical professor at the</p> <p>6 University of Montana; is that right?</p> <p>7 A. That's correct.</p> <p>8 Q. Can you explain to me what the clinical part</p> <p>9 of "clinical professor" means?</p> <p>10 A. Yes. Clinical professors are professors who</p> <p>11 have academic responsibilities but also have business</p> <p>12 experience or business ties. The term I think came from</p> <p>13 medical schools where practicing doctors would also be</p> <p>14 professors.</p> <p>15 Q. Are you on the tenure track?</p> <p>16 A. No. Clinical professors at the</p> <p>17 University of Montana are not tenurable.</p> <p>18 Q. So you do not have tenure; is that right?</p> <p>19 A. That is correct. I do not have tenure.</p> <p>20 Q. Okay.</p> <p>21 Are the opinions -- excuse me. Mind if I</p> <p>22 start over?</p> <p>23 A. [Gesture.]</p> <p>24 Q. Are all of the opinions in your report within</p> <p>25 an academic field that you publish in?</p>	<p style="text-align: right;">Page 44</p> <p>1 the spring semester I teach online.</p> <p>2 Q. Got it.</p> <p>3 Has a court ever declined to receive your</p> <p>4 testimony?</p> <p>5 A. No.</p> <p>6 Q. Have you ever been struck as an expert?</p> <p>7 A. No.</p> <p>8 Q. Have you ever offered opinions in court about</p> <p>9 online auctions?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: Outside of this matter, no.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Have you ever offered opinions in court about</p> <p>14 online auction mechanics?</p> <p>15 MR. RENARD: Same objection.</p> <p>16 THE WITNESS: Again, outside of this, no.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Have you ever offered opinions in court about</p> <p>19 fairness and transparency?</p> <p>20 MR. RENARD: Same objection.</p> <p>21 THE WITNESS: I have offered opinions about</p> <p>22 fairness. And transparency, I guess, to amend my</p> <p>23 answer.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Is that the Juul litigation?</p>
<p style="text-align: right;">Page 43</p> <p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: No. I think that most of the</p> <p>3 opinions in my reports are in fields where I have</p> <p>4 industry experience rather than publication experience.</p> <p>5 There are exceptions. For instance, I have published in</p> <p>6 areas related to surveys, and my rebuttal report has</p> <p>7 opinions about surveys.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. So your opinions are summarized in -- your</p> <p>10 opening opinions are summarized in Paragraph 23 of your</p> <p>11 opening report.</p> <p>12 Do you mind taking a look at that?</p> <p>13 A. I am there.</p> <p>14 Q. Okay.</p> <p>15 For these opening opinions, are there any</p> <p>16 opinions you're offering where you've published in that</p> <p>17 academic field?</p> <p>18 A. No.</p> <p>19 Q. Do you live in Montana?</p> <p>20 A. Part of the year.</p> <p>21 Q. And part of the year you live in Minnesota?</p> <p>22 A. That's correct.</p> <p>23 Q. Do you teach in person at the</p> <p>24 University of Montana?</p> <p>25 A. In the fall semester I teach in person, and in</p>	<p style="text-align: right;">Page 45</p> <p>1 A. Yes.</p> <p>2 Q. Okay. What about other than the Juul</p> <p>3 litigation?</p> <p>4 A. In --</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: Other than the Juul litigation,</p> <p>7 I have offered opinions in the trial against the --</p> <p>8 where the defendants were USC's Rossier School of</p> <p>9 Education where I talked about fairness and</p> <p>10 transparency.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Okay. Have you ever offered opinions in court</p> <p>13 about substitutability?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: No.</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. Have you ever offered opinions in court about</p> <p>18 whether a company dominates a market?</p> <p>19 MR. RENARD: Same objection.</p> <p>20 THE WITNESS: My Juul opinions touched on</p> <p>21 Juul's market share, and so in that sense, yes, but that</p> <p>22 is the only sense I can think of.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Have you ever offered opinions in court about</p> <p>25 advertiser expectations?</p>

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<p style="text-align: right;">Page 46</p> <p>1 MR. RENARD: Same objection.</p> <p>2 THE WITNESS: The USC and Juul cases touch on</p> <p>3 those cases, but I might need to ask questions to</p> <p>4 understand with certainty.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. We may come back to that, but for now, have</p> <p>7 you ever offered opinions in court about what publishers</p> <p>8 expect?</p> <p>9 MR. RENARD: Same objection.</p> <p>10 THE WITNESS: Other than this matter, no.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Okay.</p> <p>13 Before you were hired on this case, have</p> <p>14 you -- excuse me.</p> <p>15 Before you were hired on this case, had you</p> <p>16 ever heard of the Google auction mechanics you discuss</p> <p>17 in your opinions?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: When you say "Google auction</p> <p>20 mechanics," are you talking about what I call Google's</p> <p>21 conducts or are you talking about the auction dynamics</p> <p>22 such as first price, second price?</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. I'll go one by one to make it easier.</p> <p>25 Before you were hired in this case, had you</p>	<p style="text-align: right;">Page 48</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. In this 2008-2009 period when you first heard</p> <p>3 of first look, was that in connection with something</p> <p>4 Google was doing?</p> <p>5 A. No. It was in abstract terms.</p> <p>6 Q. I see.</p> <p>7 And what about last look? When did you first</p> <p>8 hear of last look?</p> <p>9 A. About the same time.</p> <p>10 Q. Okay.</p> <p>11 And when you heard about first and last look,</p> <p>12 was it in relation to something a specific company was</p> <p>13 doing?</p> <p>14 A. It was related to the waterfall auction</p> <p>15 process where publishers, networks, or exchanged would</p> <p>16 enter what we called line items at different places in</p> <p>17 the waterfall, and so we referred to the first position</p> <p>18 as "first look" and the last position as "last look." I</p> <p>19 can't recall right now if it was in relation to specific</p> <p>20 companies or if we were talking about it in terms of</p> <p>21 general auction dynamics.</p> <p>22 Q. Were you aware in 2008 or 2009 of whether</p> <p>23 auctions were using a first or last look feature?</p> <p>24 A. Again, in the waterfall auction setup, we were</p> <p>25 aware of it, and we knew that any waterfall would have</p>
<p style="text-align: right;">Page 47</p> <p>1 ever heard of reserve price optimization?</p> <p>2 A. No.</p> <p>3 Q. Before you were hired in this case, had you</p> <p>4 ever heard of Dynamic Revenue Sharing?</p> <p>5 A. No.</p> <p>6 Q. Before you were hired in this case, had you</p> <p>7 ever heard of Bernanke?</p> <p>8 A. Not the Google program Bernanke.</p> <p>9 Q. Before you were hired in this case, had you</p> <p>10 ever heard of first look?</p> <p>11 A. Yes, I had heard about first look as an</p> <p>12 auction dynamic.</p> <p>13 Q. And when you'd heard about first look, was</p> <p>14 that -- well, why don't I just open it up.</p> <p>15 Tell me when you first heard about first look.</p> <p>16 A. My recollection is somewhat vague, but I would</p> <p>17 say 2008 or 2009 I heard of first look as it relates to</p> <p>18 digital advertising auctions.</p> <p>19 MR. RENARD: Mr. Rosson, I don't want to</p> <p>20 interrupt your flow. Whenever you're at a convenient</p> <p>21 breaking point, we've gone over an hour.</p> <p>22 MR. ROSSON: Sure.</p> <p>23 MR. RENARD: We'll just take a break.</p> <p>24 MR. ROSSON: Two minutes.</p> <p>25 MR. RENARD: Sure.</p>	<p style="text-align: right;">Page 49</p> <p>1 either a single participant or a set of participants</p> <p>2 operating in the first tier of that waterfall and then</p> <p>3 in the final tier.</p> <p>4 Q. And for that answer you mean in the industry</p> <p>5 as a whole, not specifically to a Google auction; is</p> <p>6 that right?</p> <p>7 A. That's correct. I am not speaking</p> <p>8 specifically of a Google auction.</p> <p>9 Q. Okay.</p> <p>10 Would you like to take a break?</p> <p>11 A. Yeah, I think that would be great.</p> <p>12 MR. ROSSON: Great. Let's go off the record.</p> <p>13 THE VIDEOGRAPHER: This is the end of Media 1.</p> <p>14 We are going off the record at 10:16 a.m.</p> <p>15 (RECESS TAKEN)</p> <p>16 THE VIDEOGRAPHER: We are back on the record</p> <p>17 with Media 2 at 10:32 a.m.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. Dr. Chandler, is there any testimony that</p> <p>20 you've given so far that you would like to change or</p> <p>21 correct?</p> <p>22 A. No.</p> <p>23 Q. For these next questions, I want to set aside</p> <p>24 any work you did on this case, communications with</p> <p>25 lawyers and so on. Don't want to know about those. Are</p>

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<p style="text-align: right;">Page 50</p> <p>1 you with me?</p> <p>2 A. Yes.</p> <p>3 Q. Okay.</p> <p>4 So before you were engaged on this case, in</p> <p>5 your private sector and academic life, had you ever</p> <p>6 reviewed Google's disclosures about its auction</p> <p>7 features?</p> <p>8 MR. RENARD: Objection to form.</p> <p>9 THE WITNESS: I have a vague recollection of</p> <p>10 visiting like the AdX help pages and Google Ad pages as</p> <p>11 part of my client work, but I did not visit them with an</p> <p>12 eye toward auction dynamic disclosures.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. Okay.</p> <p>15 Do you remember when you visited those Google</p> <p>16 help pages?</p> <p>17 A. I would guess that it was maybe 2015 or 2016.</p> <p>18 I'm thinking of a particular client who was advertising</p> <p>19 via AdX. And so I think I might have looked at those</p> <p>20 pages as part of my research, but I can't recall the</p> <p>21 contents of the pages at that time.</p> <p>22 Q. Okay. And what about after that -- and</p> <p>23 correct me if I get the years wrong -- 2015-2016 time</p> <p>24 period, do you remember reviewing those disclosures</p> <p>25 again before you were engaged?</p>	<p style="text-align: right;">Page 52</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Okay.</p> <p>3 From the period of 2016 up to when you were</p> <p>4 hired on this case, do you remember reviewing any Google</p> <p>5 disclosures about its auction mechanics?</p> <p>6 A. No.</p> <p>7 Q. Have you ever recommended that a client use</p> <p>8 any of Google's auction tools?</p> <p>9 A. Yes.</p> <p>10 Q. Do you have clients who use Google auction</p> <p>11 tools?</p> <p>12 A. Yes.</p> <p>13 Q. Has that been the case from 2015 through the</p> <p>14 present?</p> <p>15 A. There may be short periods of time where that</p> <p>16 was not the case, but I believe that it even predates</p> <p>17 2015.</p> <p>18 THE REPORTER: 2015?</p> <p>19 THE WITNESS: 2015.</p> <p>20 THE REPORTER: Thank you.</p> <p>21 THE WITNESS: And also, the advertiser tool</p> <p>22 that I'm saying is "DV360." I'm just from the south, so</p> <p>23 they sound the same.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Forgive me if I just asked this. Do you have</p>
<p style="text-align: right;">Page 51</p> <p>1 A. I don't believe so.</p> <p>2 Q. Okay.</p> <p>3 Before you were engaged on this case, did you</p> <p>4 know whether Google ran experiments on auction traffic?</p> <p>5 A. No.</p> <p>6 Q. Before you were engaged on this case, do you</p> <p>7 know whether Google ran optimizations on auction</p> <p>8 traffic?</p> <p>9 A. No.</p> <p>10 Q. Before you were engaged on this case, did you</p> <p>11 know whether Google could adjust bids in its discretion?</p> <p>12 A. No.</p> <p>13 MR. RENARD: Objection to form.</p> <p>14 THE WITNESS: No. If I'm correctly</p> <p>15 understanding what you mean by "in its discretion," I</p> <p>16 think the answer is no.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Okay.</p> <p>19 Before you were hired in this case, did you</p> <p>20 know whether one way or the other Google could adjust</p> <p>21 bids at all?</p> <p>22 MR. RENARD: Objection to form.</p> <p>23 THE WITNESS: I knew that via DV360, Google</p> <p>24 provided tools that allowed bid adjustment, but did not</p> <p>25 know anything beyond that.</p>	<p style="text-align: right;">Page 53</p> <p>1 clients who do not use Google tools?</p> <p>2 A. Currently I believe all of my clients use</p> <p>3 Google tools. I have had clients that do not use Google</p> <p>4 tools.</p> <p>5 Q. Is one of your jobs at Data Insights to advise</p> <p>6 clients about Google tools?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I would not consider that one of</p> <p>9 my primary jobs. I am occasionally asked about tool</p> <p>10 recommendations, but I am -- that is not the primary</p> <p>11 type of consulting I provide.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Do you have clients at Data Insights who use</p> <p>14 AdX?</p> <p>15 A. I have clients that participate in AdX</p> <p>16 auctions.</p> <p>17 Q. And is part of your role at Data Insights to</p> <p>18 advise clients about AdX?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: My work at Data Insights</p> <p>21 typically involves analyzing data for clients and some</p> <p>22 of that data has run through AdX. So in that sense,</p> <p>23 yes.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Help me understand what work you're performing</p>

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<p style="text-align: right;">Page 54</p> <p>1 with client data when you receive it. I don't need 2 specifics about an individual client. 3 MR. RENARD: Objection to form. 4 THE WITNESS: The work is highly varied. I 5 would say a large fraction of it is related to measuring 6 marketing effectiveness and making recommendations on 7 optimizations and things like that. 8 BY MR. ROSSON: 9 Q. As part of that work, do you advise clients 10 about how auction mechanics work? 11 A. I have done that in the past. I don't have 12 any clients now where I'm currently advising them on how 13 auction mechanics work. 14 Q. Is that a core part of Data Insights' 15 business? 16 MR. RENARD: Objection to form. 17 THE WITNESS: It's hard for me to know what 18 "core part" means in this sense. Certainly there have 19 been clients where my advice on auction participation 20 was an important part of the engagement to the client. 21 BY MR. ROSSON: 22 Q. Let me do an example. 23 Is -- to take reserve price optimization as an 24 example, is that the type of auction mechanic that you 25 would advise a client about?</p>	<p style="text-align: right;">Page 56</p> <p>1 A. Yes, or describe online auction dynamics. 2 Q. Okay. 3 Would you agree that the -- one of the 4 functions of Data Insights is to try to help clients 5 maximize their profits? 6 A. I would say that our job at Data Insights is 7 to help clients achieve their business goals, and most 8 businesses are interested in maximizing their profits. 9 So in that sense, yes. 10 Q. You want to help companies spend their 11 advertising money efficiently; is that right? 12 MR. RENARD: Objection to form. 13 THE WITNESS: In broad strokes that is one 14 thing that we help clients with. 15 BY MR. ROSSON: 16 Q. So at Data Insights, all things equal, you 17 would rather Google charge less for its products, right? 18 A. I'm not sure how that follows. 19 Q. Do any of your clients -- well, when your 20 clients transact on AdX, you understand there's a take 21 rate; is that right? 22 A. Yes. 23 Q. So all things equal, for your clients you'd 24 rather that take rate be higher rather than lower; is 25 that right?</p>
<p style="text-align: right;">Page 55</p> <p>1 MR. RENARD: Objection to form. 2 THE WITNESS: If I had been advising a client 3 during the time period when reserve price optimization 4 came out and I knew about reserve price optimization, 5 then, yes, that would be the sort of thing that I would 6 advise a client on. 7 BY MR. ROSSON: 8 Q. And is the work that you perform for clients, 9 does that involve looking into the rules of online 10 auctions? 11 MR. RENARD: Objection. Form. 12 THE WITNESS: I think knowledge of the auction 13 rules is part of the work, but I wouldn't necessarily 14 classify it as looking into the rules of online 15 auctions. 16 BY MR. ROSSON: 17 Q. So would a typical client ever ask you the 18 question: What are the rules of this online auction? 19 Any online auction in particular. 20 MR. RENARD: Objection. Form. 21 THE WITNESS: They might ask something like 22 that or: How does this auction work? 23 BY MR. ROSSON: 24 Q. And so part of your responsibility would be to 25 tell clients how auctions work. Is that fair?</p>	<p style="text-align: right;">Page 57</p> <p>1 MR. RENARD: Objection to form. 2 THE WITNESS: I've never been asked to advise 3 on that sort of thing, nor can I think of an example 4 where I recommend a certain auction environment over 5 another based on take rate. Usually I was concerned 6 with the performance of the marketing. 7 BY MR. ROSSON: 8 Q. Okay. 9 You can't remember a time that you've ever 10 recommended one auction over another on the basis of 11 auction take rates; is that correct? 12 MR. RENARD: Objection to form. 13 THE WITNESS: Perhaps I should say solely on 14 the basis of auction take rates. 15 BY MR. ROSSON: 16 Q. Are auction take rates a consideration when 17 you recommend different auction platforms to clients? 18 A. If I'm working with clients on the buy side, 19 then part of my work often involves calculations of 20 return on investment or return on ad spend, and take 21 rate is part of measuring that return. 22 Q. Would your clients rather pay a lower take 23 rate than a higher take rate? 24 MR. RENARD: Objection to form. 25 THE WITNESS: I think all else being equal, my</p>

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<p style="text-align: right;">Page 58</p> <p>1 clients who are operating in an auction environment</p> <p>2 would prefer to pay a lower take rate.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. And all things equal, your clients would</p> <p>5 rather have greater access to Google's data rather than</p> <p>6 less access. Is that fair?</p> <p>7 A. Yes, particularly as the data relates to the</p> <p>8 measurement of marketing performance.</p> <p>9 Q. All things equal, you would rather your</p> <p>10 clients have more control over Google's ecosystem. Is</p> <p>11 that fair?</p> <p>12 MR. RENARD: Objection to form.</p> <p>13 THE WITNESS: I think I would phrase it</p> <p>14 slightly differently in that my advertising clients</p> <p>15 would prefer greater control over their data and their</p> <p>16 ability to measure the performance of their marketing.</p> <p>17 If we say "control over Google's ecosystem," that does</p> <p>18 not seem accurate to me.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. Let's discuss your methodology next. I'm</p> <p>21 shifting gears. Do you understand?</p> <p>22 A. Yes.</p> <p>23 Q. In preparing your opinions in this case, what</p> <p>24 was your methodology?</p> <p>25 A. In preparing my opinions in the opening</p>	<p style="text-align: right;">Page 60</p> <p>1 fairness in business practices, but I can't recall if</p> <p>2 they applied the CRISP-DM methodology.</p> <p>3 Q. Other than you in this case, are you aware of</p> <p>4 anyone ever using the CRISP-DM methodology to make a</p> <p>5 determination of what is fair?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: I am not aware of when the</p> <p>8 CRISP-DM methodology has been applied to the questions</p> <p>9 of fairness specifically.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Or whether it's ever been applied to questions</p> <p>12 of fairness, correct?</p> <p>13 A. Yes, that's correct.</p> <p>14 Q. Are you aware of whether the CRISP-DM</p> <p>15 methodology has ever been applied to a question of</p> <p>16 whether something is transparent?</p> <p>17 A. Other than my application here, I'm not sure</p> <p>18 if it has been applied to transparency.</p> <p>19 Q. And this is by no means to limit your answer.</p> <p>20 Can you give me four or five sentences about what the</p> <p>21 CRISP-DM methodology is?</p> <p>22 A. Yes. The CRISP-DM methodology has seven</p> <p>23 steps. It begins with business understanding, then</p> <p>24 proceeds to data understanding. And those two are</p> <p>25 depicted as a cycle. So data understanding informs</p>
<p style="text-align: right;">Page 59</p> <p>1 report, I applied a standard data science methodology</p> <p>2 that goes by the name CRISP-DM, C-R-I-S-P hyphen D-M.</p> <p>3 Q. Is CRISP-DM mentioned in your opening report?</p> <p>4 A. No. The features of CRISP-DM are mentioned in</p> <p>5 the report, but I do not call out the methodology by</p> <p>6 name.</p> <p>7 Q. Give me a thumbnail sketch of CRISP-DM.</p> <p>8 A. CRISP-DM is a data science methodology that</p> <p>9 has seven steps and is a standard methodology in data</p> <p>10 science and data mining. It was, I think, originally</p> <p>11 conceived in the late '90s but published in '99 and</p> <p>12 2000. And I'm happy to walk through the steps of it,</p> <p>13 but it's something that I use professionally and it's</p> <p>14 also something that I teach in my classes.</p> <p>15 Q. Is the CRISP -- excuse me.</p> <p>16 Can the CRISP-DM methodology be used to make a</p> <p>17 scientific determination about what is fair?</p> <p>18 A. I think yes.</p> <p>19 Q. Can the CRISP-DM methodology be used to make a</p> <p>20 scientific determination about what is transparent?</p> <p>21 A. Yes.</p> <p>22 Q. Other than your work on this case, are you</p> <p>23 aware of any peer-reviewed research where the CRISP-DM</p> <p>24 methodology has been used to determine what is fair?</p> <p>25 A. I have read academic articles talking about</p>	<p style="text-align: right;">Page 61</p> <p>1 business understanding and vice versa.</p> <p>2 From there you move to data preparation, which</p> <p>3 is the process by which you transform raw data into data</p> <p>4 that can be used for modeling. From data preparation we</p> <p>5 move to modeling, model evaluation, and then deployment.</p> <p>6 And at the modeling step, sometimes we return to the</p> <p>7 business understanding and data understanding cycle.</p> <p>8 Q. What was your dataset in reaching your</p> <p>9 opinions?</p> <p>10 A. My dataset in reaching my opinions were the</p> <p>11 materials in this case, the documents produced, the</p> <p>12 deposition testimony, peer-reviewed literature,</p> <p>13 information from popular press and trade press, and I</p> <p>14 outline those sources in my opening report.</p> <p>15 Q. Did you say that CRISP-PM -- excuse me.</p> <p>16 Did you say that CRISP-DM involves a modeling</p> <p>17 step?</p> <p>18 A. Yes.</p> <p>19 Q. Did you do modeling for this case?</p> <p>20 A. Yes. In this case the modeling step was the</p> <p>21 synthesis of the data in the report. So framing my</p> <p>22 report via this methodology, the deployment of the model</p> <p>23 would be the release of the report, and the model would</p> <p>24 be the opinions in my reports that synthesize the data.</p> <p>25 Q. Are you aware of CRISP-DM being used as a</p>

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<p style="text-align: right;">Page 62</p> <p>1 methodology on a nonquantitative dataset?</p> <p>2 A. Yes.</p> <p>3 Q. Are you offering opinions on the expectations</p> <p>4 of publishers and advertisers?</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: Yes, I offer opinions on what</p> <p>7 advertisers and publishers expect in the marketplace.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. Are you offering opinions on what every</p> <p>10 publisher expects?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I'm offering opinions on general</p> <p>13 industry practices and what publishers generally would</p> <p>14 expect. There are certainly exceptions.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. What do you mean "there are certainly</p> <p>17 exceptions"?</p> <p>18 A. The ecosystem of digital marketing has so many</p> <p>19 participants that I would not be comfortable speaking</p> <p>20 for all publishers without exception.</p> <p>21 Q. Is that also true for advertisers?</p> <p>22 A. Yes, my opinions about advertisers are what</p> <p>23 the industry generally accepts and not a blanket</p> <p>24 statement on every single advertiser.</p> <p>25 Q. Do all ad buyers agree on what is fair?</p>	<p style="text-align: right;">Page 64</p> <p>1 reviewed and trying to estimate the number of advertiser</p> <p>2 perspectives I have seen and trying to think about</p> <p>3 places where I have seen advertisers disagree about what</p> <p>4 is fair.</p> <p>5 Q. Is the testimony you reviewed a representative</p> <p>6 sample of all advertisers?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I believe in the context of this</p> <p>9 case it is.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Do you know how that dataset of advertisers</p> <p>12 who gave testimony was constructed?</p> <p>13 A. In certain cases I do. So the documents that</p> <p>14 I reviewed that were internal to Google, I believe that</p> <p>15 is a sample of advertisers working with Google,</p> <p>16 particularly those who are the most engaged because they</p> <p>17 made an effort to reach out to their Google</p> <p>18 representatives.</p> <p>19 In terms of the advertisers who provided</p> <p>20 third-party depositions, I do not know how that sample</p> <p>21 was drawn.</p> <p>22 Q. Do you know whether the sample of advertisers</p> <p>23 who provided testimony is a random sample?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I do not know if it is a random</p>
<p style="text-align: right;">Page 63</p> <p>1 A. I think buyers of advertising agree on</p> <p>2 fairness generally but, again, a blanket statement that</p> <p>3 covers the entire industry I think is likely to be</p> <p>4 contradicted in some cases.</p> <p>5 Q. It's not possible to make a blanket statement</p> <p>6 that covers the entire online ad industry about what is</p> <p>7 fair. Do you agree?</p> <p>8 MR. RENARD: Objection to form.</p> <p>9 THE WITNESS: I think we can make a statement</p> <p>10 about what the industry believes is fair that is true in</p> <p>11 almost all cases, but I would not say in all cases.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. What's the confidence interval there?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: In order to talk about a</p> <p>16 confidence interval, we need to talk about the dataset</p> <p>17 we're working with. In this matter, I have looked at</p> <p>18 testimony from many advertisers, or ad buyers, and I</p> <p>19 have reviewed documents from advertisers communicating</p> <p>20 with Google, and I would estimate that maybe one in a</p> <p>21 hundred would disagree with my conception of fairness</p> <p>22 based on my review of the data in this case.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. What's the basis for that estimation?</p> <p>25 A. I'm thinking through the testimony that I've</p>	<p style="text-align: right;">Page 65</p> <p>1 sample.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. Do you know if it's a representative sample?</p> <p>4 A. I believe it to be representative based on my</p> <p>5 experience in the industry and looking at the list of</p> <p>6 companies who provided testimony and reading that</p> <p>7 testimony. So I think that as a statistician, I would</p> <p>8 consider it a random sample -- or I'm sorry, a</p> <p>9 representative sample. I misspoke.</p> <p>10 Q. A representative sample of what overall</p> <p>11 population?</p> <p>12 A. Of advertisers engaged in programmatic</p> <p>13 advertising at scale.</p> <p>14 Q. And do you believe that the number of</p> <p>15 advertisers who provided testimony is sufficient to form</p> <p>16 a representative population?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: I think with my industry</p> <p>19 experience and familiarity with the advertising</p> <p>20 landscape, my work dating back to the time at aQuante, and</p> <p>21 my work at Microsoft, and my work at Data Insights, and</p> <p>22 applying the testimony that I have reviewed, I can say</p> <p>23 that that sum total, my experience plus the testimony,</p> <p>24 represents a representative sample of large advertisers.</p> <p>25</p>

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<p style="text-align: right;">Page 66</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Of large advertisers?</p> <p>3 A. That's correct. I said "of large</p> <p>4 advertisers."</p> <p>5 There is less testimony of small advertisers,</p> <p>6 and so my conclusions on small advertisers is driven</p> <p>7 more by my experience working via Data Insights' clients</p> <p>8 with many small advertisers.</p> <p>9 Q. And to go back to the confidence interval, is</p> <p>10 it your opinion that the data you reviewed to reach your</p> <p>11 opinions gave you a confidence interval of .01?</p> <p>12 A. Yes, I would say a confidence interval or</p> <p>13 perhaps if we're talking in just a raw number, I would</p> <p>14 say a probability of error or a p-value of less than</p> <p>15 .01.</p> <p>16 Q. Did you apply any form of Bayesian reasoning</p> <p>17 to the analysis?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: I applied Bayesian statistics in</p> <p>20 a sense that I think would accord with the general</p> <p>21 principles of Bayesian analysis using data to update</p> <p>22 prior beliefs to arrive at parameter estimates.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Are you familiar with SPSS?</p> <p>25 A. Yes.</p>	<p style="text-align: right;">Page 68</p> <p>1 the top of my head.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. Do you have an estimate?</p> <p>4 A. For ad buyers I would estimate [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED].</p> <p>7 And in terms of sellers, I would expect it to</p> <p>8 be [REDACTED]</p> <p>9 Q. [REDACTED]?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: Yes, I would say something maybe</p> <p>12 [REDACTED].</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. And what percentage of ad buyers and sellers</p> <p>15 did you personally communicate with between 2013 and</p> <p>16 2023?</p> <p>17 A. In terms of ad buyers, I may not be sure on</p> <p>18 what we mean by "personally communicate with." If we</p> <p>19 include -- well, I guess I would ask: Are we including</p> <p>20 working with their data or are we talking to them in</p> <p>21 person?</p> <p>22 Q. Talking to them in person, by Zoom, by text</p> <p>23 message, by e-mail, any form of interpersonal</p> <p>24 communication.</p> <p>25 A. Okay. And we're excluding reading testimony?</p>
<p style="text-align: right;">Page 67</p> <p>1 Q. Did you use SPSS?</p> <p>2 A. No.</p> <p>3 Q. Did you use PSPP?</p> <p>4 A. PSPP? I'm not sure what PSPP is.</p> <p>5 Q. It's the open source of --</p> <p>6 A. Oh, okay. Sorry.</p> <p>7 I did not use that. I used -- in some places</p> <p>8 I used the statistical computing language R, just the</p> <p>9 letter R, and I also used the programming language</p> <p>10 Python.</p> <p>11 Q. Okay.</p> <p>12 And does your opening report or rebuttal</p> <p>13 report disclose any analysis you've done in R or Python?</p> <p>14 A. The analysis that I'm relying on in R in my</p> <p>15 rebuttal report is disclosed.</p> <p>16 I produced the R code to make the charts and</p> <p>17 the data analysis I did there.</p> <p>18 The Python work was part of my work product</p> <p>19 and text mining to understand the large datasets that I</p> <p>20 was working with.</p> <p>21 Q. Okay. We'll come back to that.</p> <p>22 How many ad buyers and sellers transacted on</p> <p>23 AdX between 2013 and 2023?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I do not know that number off</p>	<p style="text-align: right;">Page 69</p> <p>1 Q. You may include reading testimony.</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: I would say that from 2013 to</p> <p>4 2023, I personally communicated with -- between 200 and</p> <p>5 300 ad buyers. And, again, probably an order of</p> <p>6 magnitude smaller for ad sellers. And I should mention</p> <p>7 that I am excluding from this estimate situations where</p> <p>8 I gave a talk to a group of ad buyers or sellers, in</p> <p>9 which case the numbers would be much higher.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. That's fair.</p> <p>12 If I'm trying to get a sense of how many ad</p> <p>13 buyers communicated to you their expectations about</p> <p>14 online advertising from 2013 to 2023, would you estimate</p> <p>15 that number is 200 and 300 ad buyers?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: If we are talking personal</p> <p>18 com- -- direct communication not through intermediaries,</p> <p>19 I would say that that is a good estimate. If we include</p> <p>20 intermediaries, for instance, where I had a client who</p> <p>21 provided technology to ad buyers, and so therefore I was</p> <p>22 aware of the ad buyer's preferences via that</p> <p>23 intermediary, then the numbers are much higher.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Can you give me an estimate including the</p>

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<p>1 intermediaries?</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: I'm thinking.</p> <p>4 I think that including intermediaries, the</p> <p>5 number of ad buyers that I have worked with would be --</p> <p>6 a rough estimate would be around 10,000 and 20,000.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. And of those 10- to 20,000 ad buyers, for how</p> <p>9 many would you be confident that you could convey their</p> <p>10 expectations about the online advertising industry?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: My sense is a substantial</p> <p>13 fraction because I worked with companies that provided</p> <p>14 the gateway to digital marketing for these ad buyers,</p> <p>15 and so I am learning about the ad buyers' preferences</p> <p>16 and expectations and informing them about the</p> <p>17 marketplace via those intermediaries.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. Has an ad buyer or seller authorized you to</p> <p>20 speak for it in offering your opinions in this case?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: I'm not sure what we mean by</p> <p>23 "authorize" here.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. In offering your opinions in this case, is</p>	<p>1 Q. Okay.</p> <p>2 This may sound similar. It's a little</p> <p>3 different.</p> <p>4 As part of your assignments in this case, did</p> <p>5 you perform any surveys of ad buyers or sellers?</p> <p>6 A. No, as part of my work in this case I did not</p> <p>7 perform any surveys of ad buyers or sellers.</p> <p>8 Q. Did you conduct any interviews of ad buyers or</p> <p>9 sellers?</p> <p>10 A. I did not personally conduct any interviews of</p> <p>11 ad buyers or sellers, but I have read testimony that was</p> <p>12 solicited from them.</p> <p>13 Q. Do you have an -- I want to go on what you've</p> <p>14 read, not communications with counsel.</p> <p>15 Do you have an understanding of whether the</p> <p>16 states in this case are saying that Google violated</p> <p>17 state deceptive trade practice laws?</p> <p>18 A. I know that there are deceptive trade practice</p> <p>19 law claims in this case, but I don't know much beyond</p> <p>20 that.</p> <p>21 Q. Are you offering an opinion on whether Google</p> <p>22 violated any deceptive trade practice laws?</p> <p>23 A. I'm not a legal expert. I'm offering opinions</p> <p>24 on Google's conducts relative to what I consider</p> <p>25 generally accepted practices in the industry. So I</p>
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<p>1 there any ad buyer or seller who said yes, you can speak</p> <p>2 on my behalf?</p> <p>3 MR. RENARD: Same objection.</p> <p>4 THE WITNESS: No. I have not disclosed my</p> <p>5 participation in this case to these ad buyers.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. So the ad buyers -- well, okay, that's fine.</p> <p>8 In offering your opinions in this case, are</p> <p>9 you speaking on behalf of any of your clients from</p> <p>10 Data Insights?</p> <p>11 MR. RENARD: Objection to the form of the</p> <p>12 question.</p> <p>13 THE WITNESS: I don't see myself as speaking</p> <p>14 on their behalf; I see myself as synthesizing their</p> <p>15 experience in an effort to interpret the facts and data</p> <p>16 made -- provided to me as part of this case.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Have you reached out to any ad buyer or seller</p> <p>19 that you've spoken with to ask them if you've correctly</p> <p>20 represented their position?</p> <p>21 A. No, and I believe that would violate the</p> <p>22 protective order I've signed.</p> <p>23 Q. So you believe you cannot do that; is that</p> <p>24 right?</p> <p>25 A. Correct.</p>	<p>1 think the answer is no.</p> <p>2 Q. Are you offering any opinions on whether</p> <p>3 Google violated antitrust laws?</p> <p>4 A. No.</p> <p>5 Q. Did you consider AdX or any other online</p> <p>6 exchange transactional data in forming your opinions?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I believe that the data I</p> <p>9 analyzed as part of my rebuttal report includes some AdX</p> <p>10 data, but that is the extent to which I analyzed AdX</p> <p>11 data in preparing my reports.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. So for your opening report, you did not</p> <p>14 analyze AdX data; is that correct?</p> <p>15 A. I did not analyze numerical AdX data beyond</p> <p>16 numerical data that was included in materials I</p> <p>17 reviewed, but I certainly reviewed a great deal of AdX</p> <p>18 data in the form of things like emails and deposition</p> <p>19 testimony.</p> <p>20 Q. Are you relying on any numerical AdX data in</p> <p>21 offering your opinions?</p> <p>22 MR. RENARD: Objection to form.</p> <p>23 THE WITNESS: I believe that I offer some</p> <p>24 numerical estimates, but, again, they are numbers drawn</p> <p>25 from text-based documents, not analysis of numerical</p>

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<p style="text-align: right;">Page 74</p> <p>1 data per se. 2 BY MR. ROSSON: 3 Q. Do you know who the parties are to the 4 transactions at issue in this case? 5 MR. RENARD: Objection to form. 6 THE WITNESS: There are a variety of 7 advertising transactions that happen as a part of this 8 case, and so I'm aware of the parties that use the 9 Google technologies that are at issue in this case. 10 BY MR. ROSSON: 11 Q. Are you aware of all of them? 12 A. I doubt that I am aware of all of the 13 individual users of Google Ads, GAM, DV360 and AdX. 14 Q. Is that something you sought to understand as 15 part of your assignment? 16 MR. RENARD: Objection to form. 17 THE WITNESS: I sought to understand those 18 entities in aggregate but not actively as individuals. 19 BY MR. ROSSON: 20 Q. How many of the parties to the transactions at 21 issue in this case read Google's help page? 22 MR. RENARD: Objection to form. 23 THE WITNESS: I do not have access to that 24 information. 25</p>	<p style="text-align: right;">Page 76</p> <p>1 Q. Can you give me a percentage of parties, of 2 companies transacting on AdX from 2013 to 2023, that 3 reviewed any of Google's auction communications on its 4 blog or on its Help page or otherwise? 5 A. No, I cannot. 6 Q. How many of the companies who transacted on 7 AdX from 2013 to 2023 know what reserve price 8 optimization is? 9 MR. RENARD: Objection to form. 10 THE WITNESS: I do not know. 11 BY MR. ROSSON: 12 Q. Same answer for DRS? 13 MR. RENARD: Objection to form. 14 THE WITNESS: Yes, I also do not know the 15 fraction of companies who transacted on AdX from 2013 to 16 2023 who know what DRS is or understand how it works. 17 BY MR. ROSSON: 18 Q. And you mentioned acronym soup this morning. 19 I'm the first guilty party. Do we agree that DRS stands 20 for Dynamic Revenue Sharing? 21 A. We do agree on that, and I'm guessing we will 22 get to this later, but there were a few different 23 flavors of that. 24 Q. Yes. 25 How many of the parties -- sorry, strike that.</p>
<p style="text-align: right;">Page 75</p> <p>1 BY MR. ROSSON: 2 Q. How many of the parties to the transactions at 3 issue in this case read Google's blog posts? 4 MR. RENARD: Objection to form. 5 THE WITNESS: Could you clarify for me what we 6 mean by "parties at issue"? 7 BY MR. ROSSON: 8 Q. Yes. Am I right that in AdX, publishers and 9 advertisers enter into transactions with each other? 10 MR. RENARD: Objection. Form. 11 THE WITNESS: Sometimes via intermediaries, 12 but yes. 13 BY MR. ROSSON: 14 Q. Okay. 15 I'm talking about companies that utilized AdX 16 from 2013 to 2023. Are you with me? 17 A. Yes. 18 Q. Okay. How many of those companies read any 19 statement made by Google about its auctions? 20 A. I have reviewed evidence of individual 21 companies, sometimes reviewing statements by Google, 22 sometimes not. For instance, a particular part of the 23 help page. But I don't have a comprehensive 24 understanding of that, nor do I think I have access to 25 the data that would tell it to me.</p>	<p style="text-align: right;">Page 77</p> <p>1 How many of the companies that transacted on 2 AdX from 2013 to 2023 know what Bernanke is? 3 MR. RENARD: Objection to form. 4 THE WITNESS: I do not know the answer to 5 that. 6 BY MR. ROSSON: 7 Q. Okay. 8 How many of the parties who transacted on AdX 9 from 2013 to 2023 have an opinion about Bernanke? 10 MR. RENARD: Objection to form. 11 THE WITNESS: I think that is a number that it 12 may be possible to estimate based on the way in which 13 the industry greeted the news of Bernanke when the 14 information was released publicly, but I do not know the 15 fraction that had had an opinion about Bernanke, and I 16 believe the information about Bernanke came out in 2021. 17 So it does -- or 2022. So it does overlap slightly with 18 our time period. 19 BY MR. ROSSON: 20 Q. Okay. How many of the companies that 21 transacted on AdX from 2013 to 2023 found any 22 representation or omission by Google to be material? 23 MR. RENARD: Objection to form. 24 THE WITNESS: I've reviewed testimony of 25 companies that I believe would meet the definition of</p>

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<p>1 "material." I'm not awa- -- I do not know the precise 2 legal definition of that, [REDACTED] 3 [REDACTED] 4 [REDACTED] 5 [REDACTED] 6 [REDACTED] 7 [REDACTED] 8 [REDACTED] 9 [REDACTED] 10 BY MR. ROSSON: 11 Q. You estimated that 2013 to 2023 on AdX, we're 12 [REDACTED]? 13 A. I thought I said something more like 14 [REDACTED]. 15 Q. Okay. [REDACTED] 16 [REDACTED] 17 A. That is my attempt to give an estimate. 18 Q. Okay. 19 Can you off- -- sorry. Are you offering an 20 opinion about what percentage of those [REDACTED] 21 advertisers found any representation or omission by 22 Google to be material? 23 MR. RENARD: Objection to form. 24 THE WITNESS: The phrasing "representation or 25 omission by Google to be material" sounds like it has</p>	<p>1 MR. RENARD: Objection. Form. 2 THE WITNESS: Yes, it's fair to say that I 3 can't tell you the number of companies that suffered an 4 economic loss for any particular auction feature during 5 this time period. 6 BY MR. ROSSON: 7 Q. Can you identify an ad buyer that would not 8 have joined Google's AdTech ecosystem if every detail of 9 reserve price optimization had been public? 10 MR. RENARD: Objection to form. 11 THE WITNESS: I can't identify an advertiser 12 who would not have transacted on Google's AdTech 13 ecosystem. I am aware of advertisers who would have 14 modified their behavior if they had known about some of 15 these conducts. 16 BY MR. ROSSON: 17 Q. So I'm going to make a list. It's a list of 18 every ad buyer who would not have joined Google's AdTech 19 ecosystem if every detail of reserve price optimization 20 had been public. Are you with me? 21 A. Okay. 22 Q. What's the first company on that list? 23 MR. RENARD: Objection to the form and the 24 prelude to the ultimate question. Move to strike. 25 THE WITNESS: In my previous answer I said I</p>
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<p>1 specific legal language that I do not know the 2 definition of. 3 Speaking from the perspective of a data 4 scientist, I can say that a large fraction of companies 5 may have had material impacts to their advertising 6 performance that was driven by these conducts, but I 7 don't know the extent to which they found them to be 8 material. 9 BY MR. ROSSON: 10 Q. Do you have an opinion on how many of the 11 companies that transacted on AdX from 2013 to 2023 12 suffered an economic loss? 13 MR. RENARD: Objection to form. 14 THE WITNESS: I'm not offering a specific 15 opinion on that fraction. I think there were some 16 conducts such as RPO that had an impact on a large 17 number of entities in the case of RPO on the buy side, 18 but I am not offering an opinion on the specific 19 fraction. 20 BY MR. ROSSON: 21 Q. Okay. 22 Is it fair to say you can't tell me how many 23 companies transacted on AdX and suffered an economic 24 loss because of any particular auction feature or 25 optimization from 2013 to 2023?</p>	<p>1 cannot identify an advertiser who would not have 2 transacted. 3 BY MR. ROSSON: 4 Q. Okay. Thank you. 5 Can you identify an ad buyer who would have 6 decided not to transact on AdX if every detail of each 7 of Google's auction mechanics and optimizations had been 8 disclosed? 9 MR. RENARD: Objection to form. 10 THE WITNESS: Again, I cannot identify an ad 11 buyer who would have decided to completely not transact. 12 I can identify entities that would have changed their 13 behavior had they known about all of the details. 14 BY MR. ROSSON: 15 Q. Did you review auction data for any particular 16 impression on AdX? 17 MR. RENARD: Objection to form. 18 THE WITNESS: No. 19 BY MR. ROSSON: 20 Q. Can you identify on a transactional level any 21 transaction that was affected by Bernanke? 22 MR. RENARD: Objection to form. 23 THE WITNESS: I cannot identify any 24 transaction on that individual transactional level. 25</p>

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<p>1 BY MR. ROSSON:</p> <p>2 Q. Is that also true for reserve price</p> <p>3 optimization?</p> <p>4 A. Yes, that is also true for reserve price</p> <p>5 optimization.</p> <p>6 Q. Is that also true for Dynamic Revenue Sharing?</p> <p>7 A. Yes.</p> <p>8 Q. Is that also true for first and last look?</p> <p>9 A. Yes. I did not review individual transactions</p> <p>10 as part of my work in this case.</p> <p>11 Q. All right.</p> <p>12 In offering your opinions, have you analyzed</p> <p>13 how many transactions from 2013 to 2023 cleared because</p> <p>14 of Dynamic Revenue Sharing?</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: No, I have not identified that</p> <p>17 as part of my work in this case.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. Okay.</p> <p>20 Have you, in offering your opinions, analyzed</p> <p>21 whether ad buyers as a whole earned an economic profit</p> <p>22 or sustained an economic loss because of any Google</p> <p>23 auction mechanic?</p> <p>24 MR. RENARD: Objection. Form.</p> <p>25 THE WITNESS: No, I have not analyzed that.</p>	<p>1 you rather than created by you; am I correct?</p> <p>2 A. That's correct.</p> <p>3 Q. All right.</p> <p>4 The assignment doesn't come with definitions</p> <p>5 of any terms, does it?</p> <p>6 A. No. I received the assignment as it is.</p> <p>7 Q. All right.</p> <p>8 What is a manipulation in the context of</p> <p>9 Paragraph 18, Subparagraph 5 of your opening report?</p> <p>10 A. The way I interpret "manipulation" in this</p> <p>11 context where it says the manipulation of auctions,</p> <p>12 auction rules, or auction mechanics I define as</p> <p>13 behaviors that departed from generally accepted</p> <p>14 understandings of how auctions functioned.</p> <p>15 Q. Where did you get that definition of</p> <p>16 "manipulation"?</p> <p>17 A. It is my personal definition that I'm basing</p> <p>18 on my industry experience.</p> <p>19 Q. And your assignment in Paragraph 18,</p> <p>20 Subparagraph 5 doesn't come with a statute or a law,</p> <p>21 right?</p> <p>22 A. That's correct.</p> <p>23 Q. It also doesn't come with an explanation of</p> <p>24 the law, right?</p> <p>25 A. Yes. I'm not sure what law we are speaking</p>
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<p>1 BY MR. ROSSON:</p> <p>2 Q. Also true for ad sellers?</p> <p>3 MR. RENARD: Same objection.</p> <p>4 THE WITNESS: I have not estimated if any ad</p> <p>5 sellers earned an economic profit or sustained an</p> <p>6 economic loss.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. All right. To help orient you, I'm looking at</p> <p>9 Paragraph 18, Subparagraph 5 of your opening report.</p> <p>10 Are you there?</p> <p>11 A. I am.</p> <p>12 Q. Could you read that to yourself, please? You</p> <p>13 can read it silently. I just want to make sure you get</p> <p>14 a chance to read it and then let me know when you're</p> <p>15 ready.</p> <p>16 A. Okay.</p> <p>17 Q. That assignment was provided to you, right?</p> <p>18 A. I'm sorry, I read the wrong section. I was in</p> <p>19 Paragraph 23.</p> <p>20 Q. Oh, that's all right. It's Paragraph 18,</p> <p>21 Subsection 5. It begins, "Whether, colon."</p> <p>22 A. That was entirely my fault.</p> <p>23 Q. No worries.</p> <p>24 A. Yes, this was part of my assignment.</p> <p>25 Q. All right. And the assignment was provided to</p>	<p>1 about specifically, but I do not see any legal</p> <p>2 definitions there.</p> <p>3 Q. So I'm asking if in offering your opinion any</p> <p>4 legal definitions were provided to you to rely on or</p> <p>5 make an assumption on the basis of?</p> <p>6 A. No.</p> <p>7 Q. Okay.</p> <p>8 Have you ever performed an assignment like the</p> <p>9 assignment in opening report Paragraph 18,</p> <p>10 Subparagraph 5?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I think it would depend on our</p> <p>13 definition of "like" or being similar to, but I think</p> <p>14 the answer may be yes.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. And if you could explain that, please.</p> <p>17 A. As we discussed earlier, some of my previous</p> <p>18 expert work has touched on questions of disclosure and</p> <p>19 fairness in advertising, and I would say those are</p> <p>20 somewhat akin to this assignment.</p> <p>21 Q. Have you ever been given an assignment before</p> <p>22 to determine whether a company has a conflict of</p> <p>23 interest?</p> <p>24 A. No.</p> <p>25 Q. Have you ever been given an assignment before</p>

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<p style="text-align: right;">Page 86</p> <p>1 to determine whether a company's actions have negatively</p> <p>2 impacted the transparency and overall fairness of an</p> <p>3 auction?</p> <p>4 A. No. I have been given assignments related to</p> <p>5 fairness and transparency of advertising but not</p> <p>6 advertising auction specifically.</p> <p>7 Q. I'm going to make some statements and see if</p> <p>8 you agree or disagree with them. Do you understand?</p> <p>9 A. I do.</p> <p>10 Q. Okay.</p> <p>11 The contemporary display advertising ecosystem</p> <p>12 is a dynamic technologically-driven and highly</p> <p>13 profitable market.</p> <p>14 Do you agree?</p> <p>15 MR. RENARD: Objection to the form.</p> <p>16 THE WITNESS: Yes, I believe I wrote that.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Yes. I don't -- I'll be transparent here.</p> <p>19 Sometimes I paraphrase from your report. So if you're</p> <p>20 unclear, just ask me where in your report and I'll show</p> <p>21 you.</p> <p>22 Do you understand?</p> <p>23 A. Yes.</p> <p>24 Q. All right.</p> <p>25 Marketing technology changes very quickly.</p>	<p style="text-align: right;">Page 88</p> <p>1 response to the need for more efficient and effective ad</p> <p>2 buying processes.</p> <p>3 Do you agree?</p> <p>4 MR. RENARD: Objection to form.</p> <p>5 THE WITNESS: Could you point me to where this</p> <p>6 is --</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Opening report, Paragraph 105.</p> <p>9 Wait a minute. Sorry. 102. And I'm asking</p> <p>10 whether you agree with the first sentence of</p> <p>11 Paragraph 102 of your report?</p> <p>12 A. Yes, in the context of programmatic</p> <p>13 advertising, I do agree with this.</p> <p>14 Q. Okay.</p> <p>15 Do you agree that realtime bidding was an</p> <p>16 upgrade over the waterfall process?</p> <p>17 A. Yes.</p> <p>18 Q. And now I'm -- just to orient you, I'm at</p> <p>19 Paragraph 104 on the same page.</p> <p>20 Do you agree that the shift to realtime</p> <p>21 bidding ensured that inventory could be sold at its</p> <p>22 maximum potential value in a fair and efficient manner?</p> <p>23 MR. RENARD: Objection. Form.</p> <p>24 THE WITNESS: I think in the context of my</p> <p>25 report, that depends on the implementation of the</p>
<p style="text-align: right;">Page 87</p> <p>1 Do you agree?</p> <p>2 A. Yes. I think that might depend on the</p> <p>3 context, but compared to other industries I've worked</p> <p>4 in, I think marketing technology changes rapidly.</p> <p>5 Q. Marketers are continually fine-tuning and</p> <p>6 optimizing their data and strategies.</p> <p>7 Do you agree?</p> <p>8 A. Yes. Again, I think there may be nuances</p> <p>9 related to context, but overall I agree.</p> <p>10 Q. Third-party providers like Google Ad Manager,</p> <p>11 Kevel, and Amazon Ad Server offer robust features that</p> <p>12 include targeting, ad delivery, and reporting</p> <p>13 capabilities which are essential for effective ad</p> <p>14 management and optimization.</p> <p>15 Do you agree?</p> <p>16 A. I generally agree. The second item in your</p> <p>17 list is Kevel, K-e-v-e-l. And Kevel, rather than</p> <p>18 providing the same types of tools as Google Ad Manager</p> <p>19 and Amazon Ad Server, provides a series of APIs. And so</p> <p>20 there are potentially nuances there, but I generally</p> <p>21 agree.</p> <p>22 Q. All right.</p> <p>23 The evolution of auctions in digital</p> <p>24 advertising is a tale of increasing sophistication and</p> <p>25 technological advancement reflecting the industry's</p>	<p style="text-align: right;">Page 89</p> <p>1 realtime bidding algorithm.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. So you mean that the answer to my question is</p> <p>4 dependent on the structure of the realtime bidding</p> <p>5 process?</p> <p>6 A. Yes.</p> <p>7 Q. Okay.</p> <p>8 MR. RENARD: Mr. Rosson, we have been going a</p> <p>9 little bit more than an hour. Whenever you get a</p> <p>10 convenient breaking point, perhaps we could take a</p> <p>11 break.</p> <p>12 MR. ROSSON: Now is perfect.</p> <p>13 THE VIDEOGRAPHER: Okay. This is the end of</p> <p>14 Media 2. We are going off the record at 11:30 a.m.</p> <p>15 (RECESS TAKEN)</p> <p>16 THE VIDEOGRAPHER: This is the start of</p> <p>17 Media 3. We are back on the record at 11:50 a.m.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. Good morning, Dr. Chandler.</p> <p>20 A. Good morning.</p> <p>21 Q. Is there any testimony that you've given today</p> <p>22 that you would like to change or correct?</p> <p>23 A. No.</p> <p>24 Q. All right.</p> <p>25 Could you look at Opinion 1 in your opening</p>

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<p>1 report, please? It's Opening Paragraph 23 and then</p> <p>2 Subparagraph 1.</p> <p>3 A. I have read it.</p> <p>4 Q. All right.</p> <p>5 Would this Opinion 1 hold true if it read</p> <p>6 "open web display advertising" instead of "display</p> <p>7 advertising"?</p> <p>8 A. Yes.</p> <p>9 Q. Before your involvement in this lawsuit, had</p> <p>10 you ever heard the term "open web display advertising"?</p> <p>11 A. Yes.</p> <p>12 Q. And I mean specifically those four words</p> <p>13 together in order, open web display advertising?</p> <p>14 A. Yes.</p> <p>15 Q. Have you ever heard the term "open web display</p> <p>16 advertising" used outside of litigation context?</p> <p>17 A. Yes.</p> <p>18 Q. Okay.</p> <p>19 How commonly is that term, "open web display</p> <p>20 advertising" used in the digital marketing industry in</p> <p>21 your experience?</p> <p>22 A. In my experience, it is more common for</p> <p>23 members of the industry to refer to what we are calling</p> <p>24 "open web display advertising" as display advertising</p> <p>25 and then discuss nonopen web display advertising in</p>	<p>1 Google's search advertising is a walled garden.</p> <p>2 Facebook is almost entirely a walled garden.</p> <p>3 Amazon is almost entirely a walled garden, although</p> <p>4 Amazon's DSP tool allows open web display advertising in</p> <p>5 some cases, but most of Amazon's advertising revenue is</p> <p>6 walled garden.</p> <p>7 Q. Facebook and Amazon are not entirely walled</p> <p>8 gardens in your opinion; is that right?</p> <p>9 A. Certain aspects of their advertising business</p> <p>10 would allow open web display advertising. I'm</p> <p>11 specifically thinking of Amazon's new beta product that</p> <p>12 allows advertising off of Amazon owned and operated</p> <p>13 properties.</p> <p>14 Q. And so Facebook and Amazon have a presence on</p> <p>15 the web that you would not categorize as a walled</p> <p>16 garden; is that correct?</p> <p>17 MR. RENARD: Objection. Form.</p> <p>18 THE WITNESS: I think I would restate that</p> <p>19 slightly to say that Amazon currently and Facebook in</p> <p>20 the past have aspects of their advertising business that</p> <p>21 would not be a walled garden even though the vast</p> <p>22 majority of their advertising revenue takes place within</p> <p>23 a walled garden.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Do you know the percentage breakdown for</p>
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<p>1 other terminology.</p> <p>2 Q. You used the term "Walled Gardens" in your</p> <p>3 opinion.</p> <p>4 Do you remember that?</p> <p>5 A. Yes.</p> <p>6 Q. I'm looking at Paragraph 31 of your opening</p> <p>7 report? Subparagraph 8, which is on Page 15.</p> <p>8 Do you see that there?</p> <p>9 A. I do.</p> <p>10 Q. So as you use the term "Walled Garden," is it</p> <p>11 a closed ecosystem where the platform owner controls the</p> <p>12 ad inventory and data?</p> <p>13 A. Yes.</p> <p>14 Q. And so you would call Google, Facebook, and</p> <p>15 Amazon walled gardens; is that right?</p> <p>16 A. It depends on the aspect of those businesses,</p> <p>17 but I list those companies as examples of companies that</p> <p>18 are selling advertising within walled gardens.</p> <p>19 Q. And could you explain for me what you mean</p> <p>20 by -- I think you said it depends on the context?</p> <p>21 A. Aspect.</p> <p>22 Q. Aspect.</p> <p>23 A. Yes. So Google sells open web display</p> <p>24 advertising, or facilitates that sale via their tools.</p> <p>25 But Google also operates a walled garden, for instance,</p>	<p>1 Facebook and Amazon in terms of how much of their</p> <p>2 revenue comes from walled gardens versus how much does</p> <p>3 not?</p> <p>4 A. I don't know the number exactly, but I would</p> <p>5 estimate that roughly 99 percent of their revenue comes</p> <p>6 from walled gardens.</p> <p>7 Q. And if we're thinking of the digital marketing</p> <p>8 world, what is on the other side of the walled gardens?</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: That's quite a broad question.</p> <p>11 If we're thinking about digital marketing</p> <p>12 outside of walled gardens, then we have many other forms</p> <p>13 of digital marketing, including advertising on the open</p> <p>14 web across devices.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. So tell me if I'm correct on this, and from</p> <p>17 your perspective: If advertising is occurring on the</p> <p>18 open web, it is not occurring in a walled garden?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: There are some gray areas</p> <p>21 outside of -- let me restate that.</p> <p>22 If we are talking about digital marketing</p> <p>23 outside of walled gardens, there is some advertising</p> <p>24 that is a gray area that may not be considered open web,</p> <p>25 but generally speaking, if we're talking about display</p>

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<p style="text-align: right;">Page 94</p> <p>1 advertising, then we're talking open web outside of</p> <p>2 walled gardens.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Is there ever an instance of display</p> <p>5 advertising where you would look at it and have</p> <p>6 difficulty determining whether it's inside a walled</p> <p>7 garden or on the open web?</p> <p>8 MR. RENARD: Objection. Form.</p> <p>9 THE WITNESS: The only example I can think of</p> <p>10 is related to advertising on mobile apps. So some</p> <p>11 advertising on mobile devices is via browsers. That, I</p> <p>12 would consider open web. Some advertising on mobile</p> <p>13 devices is within apps that are written to exist only on</p> <p>14 those mobile devices using technologies like</p> <p>15 Objective-C.</p> <p>16 There is a category of apps called progressive</p> <p>17 web apps where publishers are using a technology to put</p> <p>18 a sort of skin around a browser, and I think that is</p> <p>19 something of a gray area in terms of whether or not it's</p> <p>20 open and it partially depends on the implementation in</p> <p>21 the specific case.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. The gray area you described, it's gray as</p> <p>24 between what and what?</p> <p>25 A. Between being open web advertising and being</p>	<p style="text-align: right;">Page 96</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Is there any instance where you would not be</p> <p>3 able to tell me whether the display ad came from a</p> <p>4 walled garden or the open web?</p> <p>5 MR. RENARD: Same objection.</p> <p>6 THE WITNESS: If I am only seeing the</p> <p>7 advertisement and not the surrounding context and not</p> <p>8 knowing how the ad was delivered or to whom, then, yes,</p> <p>9 there are times where I cannot tell the difference.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. You understand that in some instances a</p> <p>12 consumer looking only at a display ad would not be able</p> <p>13 to determine whether it came from a walled garden or the</p> <p>14 open Internet, right?</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: Yes. I mean, you said "in some</p> <p>17 instances," and I think that there are consumers who may</p> <p>18 be entirely ignorant of all of these AdTech discussions</p> <p>19 we're having.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. I'm looking at, just to help you, opening</p> <p>22 report Paragraph 44. Let me know when you're there.</p> <p>23 A. I am there.</p> <p>24 Q. Well, no, I'm not there. Sorry. Just give me</p> <p>25 a minute.</p>
<p style="text-align: right;">Page 95</p> <p>1 inside a walled garden.</p> <p>2 Q. Display advertising occurs in walled gardens,</p> <p>3 right?</p> <p>4 MR. RENARD: Objection. Form.</p> <p>5 THE WITNESS: I believe that almost any kind</p> <p>6 of advertising can take place within a walled garden,</p> <p>7 and that includes display.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. And a display ad in a walled garden can look</p> <p>10 just like a display ad on the open web, right?</p> <p>11 MR. RENARD: Objection. Form.</p> <p>12 THE WITNESS: It depends on what we mean by</p> <p>13 "look like." If we are talking about a consumer, they</p> <p>14 can look very similar. If we were talking about a</p> <p>15 technologist who understands the underpinnings, then</p> <p>16 regardless of sort of surface similarity, they look</p> <p>17 quite different.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. If I were to show you a printout of a display</p> <p>20 ad with no other context, would you be able to tell me</p> <p>21 whether I pulled it from a walled garden or the open</p> <p>22 Internet?</p> <p>23 MR. RENARD: Objection. Form.</p> <p>24 THE WITNESS: It would probably depend on the</p> <p>25 display ad.</p>	<p style="text-align: right;">Page 97</p> <p>1 All right. And you're at opening report</p> <p>2 Paragraph 44?</p> <p>3 A. Yes.</p> <p>4 Q. Okay.</p> <p>5 Is it your opinion that one thing display ads</p> <p>6 can be used for is retargeting or remarketing to</p> <p>7 consumers who have already seen or interacted with</p> <p>8 previous ads?</p> <p>9 A. Yes. Typically retargeting or remarketing is</p> <p>10 done based on interactions with advertisers' websites,</p> <p>11 but it can also be based on interactions with previous</p> <p>12 ads.</p> <p>13 Q. Display ads can be used for retargeting or</p> <p>14 remarketing, right?</p> <p>15 A. Yes, that's correct.</p> <p>16 Q. And you have a marketing funnel in your</p> <p>17 report. Do you remember that?</p> <p>18 A. Yes.</p> <p>19 Q. And the processes of retargeting or</p> <p>20 remarketing would be down in the bottom of your funnel;</p> <p>21 is that right?</p> <p>22 A. Yes, I would say that it would be primarily at</p> <p>23 the penultimate step of the funnel.</p> <p>24 Q. Retargeted display ads are typically focused</p> <p>25 on taking a consumer from the desire phase to the action</p>

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<p style="text-align: right;">Page 98</p> <p>1 phase within your funnel framework; is that right?</p> <p>2 A. That's right. Generally speaking, the purpose</p> <p>3 of retargeted or remarketed ads is converting someone at</p> <p>4 the bottom of the funnel.</p> <p>5 Q. And retargeting using display ads occurs on</p> <p>6 the open web; is that right?</p> <p>7 A. Retargeting using display ads can take place</p> <p>8 either on the open web or within walled gardens.</p> <p>9 Q. That was my next question. Retargeting using</p> <p>10 display ads can also occur in walled gardens; is that</p> <p>11 right?</p> <p>12 A. That's correct.</p> <p>13 Q. Okay.</p> <p>14 A. Remarketing can take place within walled</p> <p>15 gardens and also on the open web.</p> <p>16 Q. Okay.</p> <p>17 Let's do an example of retargeted display ads,</p> <p>18 and I'm looking at the Paragraph 44 in your opening</p> <p>19 report.</p> <p>20 If I put a pair of pants in my shopping cart</p> <p>21 on a website of a sophisticated marketer, I might see</p> <p>22 messages of those same pants when I visit other</p> <p>23 websites; is that right?</p> <p>24 A. That's correct.</p> <p>25 Q. And that's a process that can be accomplished</p>	<p style="text-align: right;">Page 100</p> <p>1 Q. Like what?</p> <p>2 A. For instance, location. So in-app advertising</p> <p>3 provides much more granular location information than is</p> <p>4 typically available for, say, open web display, and so</p> <p>5 you will see many marketers using fine grain geographic</p> <p>6 information to do targeting in-app.</p> <p>7 Q. Is it common for in-app advertisers to use</p> <p>8 demographics or interests to target display ads?</p> <p>9 MR. RENARD: Objection. Form.</p> <p>10 THE WITNESS: It is common for them to use</p> <p>11 demographics. It is less common for them to use</p> <p>12 interests other than the contextual interest of the app.</p> <p>13 So if you are in a recipe app, that is the dominant</p> <p>14 interest segment for the targeting.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. So if I'm on a sports app, for example, the</p> <p>17 app is going to use the fact that I'm utilizing the app</p> <p>18 to become aware that I'm interested in sports; is that</p> <p>19 right?</p> <p>20 A. I would say it slightly differently.</p> <p>21 Advertisers purchasing advertisements within that app</p> <p>22 would be taking advantage of the fact that they would be</p> <p>23 advertising to people who had shown interest in sports.</p> <p>24 Q. So advertisers purchasing display ad space on</p> <p>25 apps are utilizing the user's interest as they can</p>
<p style="text-align: right;">Page 99</p> <p>1 with retargeting display ads?</p> <p>2 A. Yes.</p> <p>3 Q. Is that trying to take me to the desire part</p> <p>4 of the funnel, to the action part of the funnel?</p> <p>5 A. Yes, in the context of this example putting</p> <p>6 the pants in your shopping cart would represent the</p> <p>7 desire phase and the action that the marketer would be</p> <p>8 interested in is you completing the purchase.</p> <p>9 Q. Can display ads reach users based on</p> <p>10 demographics, interests, or browsing behavior?</p> <p>11 A. Yes.</p> <p>12 Q. And video ads can also reach users based on</p> <p>13 demographics, interests, or browsing behavior; is that</p> <p>14 right?</p> <p>15 A. Yes, if we're speaking in generalities here,</p> <p>16 there are video providers, whether we're talking about</p> <p>17 something like Connected TV or in-stream video that can</p> <p>18 use the same types of targeting dimensions such as</p> <p>19 demographics, interests, and potentially browsing</p> <p>20 behavior, although that is less common.</p> <p>21 Q. Can in-app ads reach users based on</p> <p>22 demographics, interests, or browsing behavior?</p> <p>23 A. Yes, although it does become, again, less</p> <p>24 common, and if we are talking about in-app ads, then</p> <p>25 most marketers use other targeting criteria.</p>	<p style="text-align: right;">Page 101</p> <p>1 ascertain it from what kind of app the user is on?</p> <p>2 MR. RENARD: Objection.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Is that right?</p> <p>5 MR. RENARD: Objection to the form of the</p> <p>6 question.</p> <p>7 THE WITNESS: I differentiate between in-app</p> <p>8 advertising and display advertising, and your question</p> <p>9 said advertisers purchasing display ad space on apps. I</p> <p>10 would reframe that to say advertisers purchasing in-app</p> <p>11 advertising are utilizing the user's interest.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. In-app advertising can include display ads,</p> <p>14 right?</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: The industry does not generally</p> <p>17 conflate those two channels.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. What is a display ad?</p> <p>20 A. A display ad is a banner rich media</p> <p>21 rectangular ad served on a webpage either on a laptop or</p> <p>22 desktop or a mobile device, and typically advertisers</p> <p>23 also split out tablet as a separate device.</p> <p>24 Q. Can a banner rectangular rich media ad be</p> <p>25 served within an app?</p>

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<p style="text-align: right;">Page 102</p> <p>1 A. The form factor of the ad can be served within</p> <p>2 apps, whether they are the apps that are coded custom</p> <p>3 for the platform or those progressive web apps. The</p> <p>4 definition of the channel requires, what I call in my</p> <p>5 report, this who, what, and where, and the audience, the</p> <p>6 creative, and the context. And so we're talking about</p> <p>7 the what, the creative. And so that creative can be</p> <p>8 served into an app.</p> <p>9 Q. Apps can include rectangular ads; is that</p> <p>10 true?</p> <p>11 A. Yes.</p> <p>12 Q. And those rectangular ads can include a</p> <p>13 message from a marketer, correct?</p> <p>14 A. Yes, it might be true definitionally that a</p> <p>15 message from a marketer is required to make it an ad.</p> <p>16 Q. If I were to screenshot a rectangular ad from</p> <p>17 an app and compare it to an open web display ad, are you</p> <p>18 confident you would be able to tell me which one came</p> <p>19 from the app?</p> <p>20 MR. RENARD: Objection to form.</p> <p>21 THE WITNESS: Generally speaking, yes.</p> <p>22 There would be cases where I would not be able</p> <p>23 to tell them apart. But that strikes me a little bit</p> <p>24 like saying, if you showed me a count of impressions</p> <p>25 from in-app ads and open web display, would I be able to</p>	<p style="text-align: right;">Page 104</p> <p>1 THE WITNESS: The generally accepted</p> <p>2 definition of social media advertising on the Internet</p> <p>3 is distinct from display advertising. So if what you're</p> <p>4 asking is can the creative be similar, rarely but</p> <p>5 possibly. Social media advertising has its own</p> <p>6 techniques, its own specializations, and its own</p> <p>7 creative formats, and so social media advertising is not</p> <p>8 display advertising.</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Are you familiar with a company formerly</p> <p>11 called Twitter now called X?</p> <p>12 A. I am.</p> <p>13 Q. Have you been to Twitter or X's website</p> <p>14 before?</p> <p>15 A. Yes.</p> <p>16 Q. Is -- as you categorize it, is -- well, let me</p> <p>17 step back.</p> <p>18 You're aware that Twitter changed its name to</p> <p>19 X?</p> <p>20 A. I am aware of that.</p> <p>21 Q. If I say "Twitter," will you understand I'm</p> <p>22 referring to X?</p> <p>23 A. I understand that, and that would be my</p> <p>24 preference.</p> <p>25 Q. All right. We can agree to call X "Twitter"</p>
<p style="text-align: right;">Page 103</p> <p>1 tell which count came from which channel without the</p> <p>2 column header. And the information that marketers are</p> <p>3 using takes into account the audience to whom the ad is</p> <p>4 delivered and also the context within which it's</p> <p>5 delivered. So I think it's a mistake to focus on just</p> <p>6 the similarity of the creative.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Is the answer to my question "yes"?</p> <p>9 A. I began my answer with "generally speaking,</p> <p>10 yes."</p> <p>11 Q. Okay.</p> <p>12 Let's look at Paragraph 67 of your opening</p> <p>13 report.</p> <p>14 Are you there?</p> <p>15 A. I am.</p> <p>16 Q. And you write in the second sentence of that</p> <p>17 paragraph, "Because social media advertising relies</p> <p>18 extensively on social network transmission, and high</p> <p>19 levels of consumer engagement, it is a form of</p> <p>20 advertising that I distinguish from display advertising</p> <p>21 on the open Internet."</p> <p>22 Do you see that?</p> <p>23 A. I do.</p> <p>24 Q. Social media can show display ads, can't it?</p> <p>25 MR. RENARD: Objection. Form.</p>	<p style="text-align: right;">Page 105</p> <p>1 for today?</p> <p>2 A. Yes.</p> <p>3 Q. Okay.</p> <p>4 Is Twitter a form of social media?</p> <p>5 A. Yes.</p> <p>6 Q. Is it a walled garden?</p> <p>7 A. Part of Twitter are walled gardens.</p> <p>8 I would need to think about the extent to</p> <p>9 which there's any advertising on Twitter that is not a</p> <p>10 walled garden.</p> <p>11 Q. Have you ever seen a Twitter post linked in a</p> <p>12 news article?</p> <p>13 A. Yes.</p> <p>14 Q. And from that news article, you can click the</p> <p>15 Twitter link and go to Twitter's website, right?</p> <p>16 A. That's correct.</p> <p>17 Q. And that would allow you to see the Tweet,</p> <p>18 correct?</p> <p>19 A. That's correct.</p> <p>20 Q. And you don't have to have a Twitter account</p> <p>21 to do that, do you?</p> <p>22 A. No. If you are reading a news article and</p> <p>23 they include an embedded Twitter post in that article</p> <p>24 and you click on it, generally speaking, particularly</p> <p>25 pre-2022, you could view that post without having a</p>

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<p style="text-align: right;">Page 106</p> <p>1 Twitter account. It has changed somewhat recently.</p> <p>2 Q. And you could view that Twitter post without</p> <p>3 logging into Twitter; is that right?</p> <p>4 A. That is correct. The -- an advertiser though</p> <p>5 who was showing an ad would be participating with</p> <p>6 Twitter as a walled garden, but not the end user, or</p> <p>7 consumer of the ad.</p> <p>8 Q. So in my example, the advertiser is inside a</p> <p>9 walled garden, but the viewer of the ad is not; is that</p> <p>10 correct?</p> <p>11 MR. RENARD: Objection. Form.</p> <p>12 THE WITNESS: It's not that the advertiser is</p> <p>13 inside the walled garden; it's that if the advertiser</p> <p>14 wants an ad to show up for the person who clicks on the</p> <p>15 Twitter post, that advertiser would need to transact</p> <p>16 with Twitter, which is a walled garden and generally</p> <p>17 does not allow open web display-type advertisement --</p> <p>18 advertisements to run or the customary tracking that</p> <p>19 goes with that.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. All right. And I'm going to return to my</p> <p>22 example where we have been to a website reading a news</p> <p>23 article, we saw a Twitter link and we clicked on the</p> <p>24 link. Are you with me?</p> <p>25 A. I am.</p>	<p style="text-align: right;">Page 108</p> <p>1 THE WITNESS: Yes, I believe there have been</p> <p>2 times where that was possible.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Consumers can view rectangular ads displayed</p> <p>5 on social media websites without social interaction with</p> <p>6 anyone else on the website, true?</p> <p>7 MR. RENARD: Objection. Form.</p> <p>8 THE WITNESS: It is true that consumers of the</p> <p>9 advertisement can sometimes view ads on social media</p> <p>10 websites without participating in the social network.</p> <p>11 The thing that makes Twitter a walled garden is the way</p> <p>12 in which advertisers interact with Twitter.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. Do you know what Reddit is?</p> <p>15 A. Yes.</p> <p>16 Q. Is that a social media site?</p> <p>17 A. Generally speaking, Reddit is classified as a</p> <p>18 social media site.</p> <p>19 Q. And it has banner ads, doesn't it?</p> <p>20 A. Yes, Reddit for most of its history has had</p> <p>21 banner ads on its site.</p> <p>22 Q. Up through the present, right?</p> <p>23 A. Yes. When I said "for most of its history," I</p> <p>24 was excluding some earlier times.</p> <p>25 Q. Times before 2013?</p>
<p style="text-align: right;">Page 107</p> <p>1 Q. In order to see that Tweet, you wouldn't have</p> <p>2 to like that Tweet, correct?</p> <p>3 MR. RENARD: Objection. Form.</p> <p>4 THE WITNESS: That's correct. Under the</p> <p>5 scenario where you arrive at Twitter and get to see the</p> <p>6 Twitter post, you do not have to like the Tweet itself.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. You can just look at the Tweet on Twitter's</p> <p>9 website, correct?</p> <p>10 A. Yes, a consumer or Internet surfer can just</p> <p>11 look at the Tweet.</p> <p>12 Q. And when that Internet surfer just looks at</p> <p>13 the Tweet, they might see a rectangular ad displayed at</p> <p>14 the top or bottom of Twitter's website; is that true?</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: That is not the most common type</p> <p>17 of advertising on Twitter, and Twitter has changed its</p> <p>18 ad formats over time. So I think it would depend on</p> <p>19 when this action was taking place.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Is there ever a time between 2013 and 2023</p> <p>22 where an individual could click a news link, go to</p> <p>23 Twitter's website, and see a rectangular ad at the top</p> <p>24 or bottom of the page or along the side?</p> <p>25 MR. RENARD: Objection. Form.</p>	<p style="text-align: right;">Page 109</p> <p>1 A. I don't know with precision when Reddit</p> <p>2 changed its advertising formats.</p> <p>3 Q. Have you heard the term, in connection with</p> <p>4 Reddit, "lurker"?</p> <p>5 A. Yes.</p> <p>6 Q. Do you know what a lurker is?</p> <p>7 A. My understanding of the term "lurker" on</p> <p>8 Reddit is someone who visits Reddit but does not post or</p> <p>9 interact with posts.</p> <p>10 Q. Let's use that understanding. You agree that</p> <p>11 a lurker can be served a banner ad on Reddit even though</p> <p>12 they don't post or interact with posts on Reddit, true?</p> <p>13 MR. RENARD: Objection. Form.</p> <p>14 THE WITNESS: Yes, I agree that someone who's</p> <p>15 a lurker on Reddit can see a banner ad regardless of</p> <p>16 their participation on the site.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. And that banner ad may look the same as a</p> <p>19 banner ad they saw when they were visiting a different</p> <p>20 website on the open web; is that true?</p> <p>21 MR. RENARD: Objection. Form.</p> <p>22 THE WITNESS: I believe that that is true,</p> <p>23 that you could show an ad on the open web that looks the</p> <p>24 same as an ad on Reddit. The ad formats are sometimes</p> <p>25 different on Reddit.</p>

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<p style="text-align: right;">Page 110</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. You would say that in-app advertising is a</p> <p>3 different channel than open web display advertising; is</p> <p>4 that right?</p> <p>5 A. Yes.</p> <p>6 Q. That term "channel" is a term you use in your</p> <p>7 expert reports, correct?</p> <p>8 A. That's correct.</p> <p>9 Q. Okay.</p> <p>10 I'll use that term "channel" as you use it in</p> <p>11 your reports. Will you correct me if you aren't</p> <p>12 understanding any of the questions I'm asking?</p> <p>13 A. Yes.</p> <p>14 Q. Okay.</p> <p>15 You agree that in-app ads can be delivered in</p> <p>16 a manner similar to display; is that true?</p> <p>17 A. No.</p> <p>18 Q. Okay.</p> <p>19 Let's look at your report, Paragraph 75.</p> <p>20 A. [Witness complies.]</p> <p>21 Q. Tell me why you disagree with the statement</p> <p>22 that in-app ads can be delivered in a manner similar to</p> <p>23 display.</p> <p>24 A. Without the context of the paragraph, I was</p> <p>25 disagreeing because the technology to deliver that ad</p>	<p style="text-align: right;">Page 112</p> <p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: "Demographic data" is a very</p> <p>3 broad term. It can mean something as broad as an adult</p> <p>4 or it can mean something extremely detailed. And so the</p> <p>5 specificity of that demographic data can be different,</p> <p>6 but generally speaking, demographic data can be used to</p> <p>7 target on both platforms -- or channels, I'm sorry.</p> <p>8 EXHIBITS:</p> <p>9 (Deposition Exhibit Number 2</p> <p>10 marked for identification.)</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. I'm going to hand you Exhibit 2 in case you</p> <p>13 need to refer to it.</p> <p>14 Is Chandler Exhibit 2 your "Expert Rebuttal</p> <p>15 Report" in this case?</p> <p>16 A. Yes.</p> <p>17 Q. All right.</p> <p>18 And to orient you, right now I'm looking at</p> <p>19 the Rebuttal Paragraph 4.</p> <p>20 Strike that, because my citation is not</p> <p>21 correct. So let me just ask you generally.</p> <p>22 Are you offering opinions on whether open web</p> <p>23 display advertising is used -- that term is</p> <p>24 substitutable for other forms of advertising?</p> <p>25 MR. RENARD: Objection to form.</p>
<p style="text-align: right;">Page 111</p> <p>1 and to receive information about that ad is different.</p> <p>2 Q. Okay.</p> <p>3 A. In this context, I was describing it from the</p> <p>4 advertising messaging perspective and so I mean sort of</p> <p>5 similar in that sense.</p> <p>6 Q. Do you agree with me that in-app</p> <p>7 advertising -- well, I'm sorry. Strike that.</p> <p>8 Is it true from your perspective that "In-app</p> <p>9 advertising represents an evolution in the digital</p> <p>10 marketing landscape, harnessing the pervasive use of</p> <p>11 mobile applications to deliver tailored advertisements</p> <p>12 to users in a manner similar to display"?</p> <p>13 A. Yes. In the context of how advertisers use</p> <p>14 marketing channels, I agree with that statement.</p> <p>15 Q. In Paragraph 76 of your report, towards the</p> <p>16 bottom of that paragraph, you discuss some of the</p> <p>17 information that advertisers can use to deliver</p> <p>18 personalized ads.</p> <p>19 Do you see that?</p> <p>20 A. I do.</p> <p>21 Q. And one of those types of information is</p> <p>22 demographics, correct?</p> <p>23 A. Yes.</p> <p>24 Q. Is demographic information also available to</p> <p>25 open web display advertisers, as you use the term?</p>	<p style="text-align: right;">Page 113</p> <p>1 THE WITNESS: Yes, I am offering opinions that</p> <p>2 open web display advertising is not substitutable for</p> <p>3 advertising on other channels but is complementary.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. And you use a dictionary to define the term</p> <p>6 "complementary"; is that right?</p> <p>7 A. I offer a dictionary definition of</p> <p>8 "complementary" in a footnote. I also have an</p> <p>9 understanding of complementary marketing based on my</p> <p>10 industry experience.</p> <p>11 Q. Okay. And did you rely on your dictionary</p> <p>12 definition of "complementary" in offering your rebuttal</p> <p>13 opinions?</p> <p>14 A. Relied on both the dictionary definition and</p> <p>15 my industry understanding of how marketing channels work</p> <p>16 together as part of a marketing plan.</p> <p>17 Q. And where did you get the definition of</p> <p>18 "substitutability"?</p> <p>19 A. My definition of "substitutability" came from</p> <p>20 my understanding of the term, which is that something</p> <p>21 could be entirely replaced by something else with</p> <p>22 essentially no change in function.</p> <p>23 Q. So your definition of a substitute is</p> <p>24 something that can be entirely replaced with something</p> <p>25 else with no change in function; is that correct?</p>

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<p style="text-align: right;">Page 114</p> <p>1 A. My definition of "substitute" might depend on 2 the context in which we were discussing it, but if I was 3 offering a broad definition, that would be my answer. 4 Q. What definition of "substitute" did you use in 5 the context of your substitutable opinion in this case? 6 MR. RENARD: Objection to form. 7 THE WITNESS: I'm just going to pull up my 8 substitutability opinion. 9 So I'm looking at Paragraph 52 of my rebuttal 10 report. "The Ghose Report makes inaccurate arguments 11 about the substitutability and interchangeability of 12 marketing channels that are distinct from display 13 advertising" -- "or display marketing on the open web, 14 including social media, video, in-app, retail, and CTV 15 marketing." 16 So in this case I am using my understanding of 17 Dr. Ghose's definition of "substitutability." 18 BY MR. ROSSON: 19 Q. So your opinions use Dr. Ghose's definition of 20 substitutability? 21 MR. RENARD: Objection to the form. 22 THE WITNESS: This opinion about 23 substitutability is a rebuttal to Dr. Ghose. 24 BY MR. ROSSON: 25 Q. Do you have a non-rebuttal opinion on</p>	<p style="text-align: right;">Page 116</p> <p>1 Q. How did you select that dictionary? 2 A. I don't recall. I believe I Googled 3 "complementary" definition. 4 Q. Do you know whether the Oxford Learner's 5 Dictionary is designed for people who are learning 6 English as a second language? 7 A. I do not know. 8 Q. Let's go to Rebuttal Paragraph 55. 9 A. Okay. 10 Q. I'll come back to this later. So scratch that 11 question. 12 Do you know whether "substitutability" means 13 something in particular under the antitrust laws? 14 A. I know that it has a specific antitrust 15 definition, but I do not know that definition. 16 Q. Did you apply the antitrust definition in 17 offering your opinions on substitutability? 18 MR. RENARD: Objection to form. 19 THE WITNESS: I did not specifically apply the 20 antitrust definition. I'm talking about 21 substitutability from a marketing perspective. Could 22 marketers take out one marketing channel and replace it 23 with another, and there's a similar understanding on the 24 sell side. 25</p>
<p style="text-align: right;">Page 115</p> <p>1 substitutability? 2 MR. RENARD: Objection to form. 3 THE WITNESS: I offer in my opening report 4 opinions about the complementarity of different 5 marketing channels, and therefore I'm offering opinions 6 about the lack of substitutability. 7 BY MR. ROSSON: 8 Q. And so for your opening report, what is your 9 definition of "substitutability"? 10 MR. RENARD: Objection to form. 11 THE WITNESS: I'm trying to recall if I used 12 the term "substitutability" in my opening report. I 13 think off the top of my head I talk about the channels 14 being complementary and not interchangeable or 15 exchangeable with each other, and so the definition I'm 16 using I think is the one that I gave you earlier, could 17 you entirely remove one marketing channel, replace it 18 with another with no changes in function. 19 BY MR. ROSSON: 20 Q. Let's go to Rebuttal Paragraph 52, Note -- 21 Footnote 54. Let me know when you see that. 22 A. I'm there. 23 Q. You use the Oxford Learner's Dictionary; is 24 that right? 25 A. That is correct.</p>	<p style="text-align: right;">Page 117</p> <p>1 BY MR. ROSSON: 2 Q. You could not have applied the antitrust 3 definition of substitutability in offering your opinions 4 because you do not know what it is. Is that fair? 5 A. Yes, that's correct, I do not know the 6 antitrust definition of "substitutability." 7 Q. Do you know how to define a relevant product 8 market under the antitrust laws? 9 MR. RENARD: Objection. Form. 10 THE WITNESS: No, I do not know how to define 11 that. 12 BY MR. ROSSON: 13 Q. Are you offering an opinion on the relevant 14 product market of open web display advertising? 15 MR. RENARD: Objection to form. 16 THE WITNESS: I'm not offering an opinion on 17 the relevant product market. I understand that my 18 opinions in this case inform opinions of other experts 19 who are, but I am not offering an opinion on that. 20 BY MR. ROSSON: 21 Q. Have you ever heard of the SSNIP test? 22 A. Is that S-N-I-P? 23 Q. S-S-N-I-P. 24 A. I don't believe I have. 25 Q. Did you do any analysis in offering your</p>

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<p style="text-align: right;">Page 118</p> <p>1 opinions involving small but significant non-transitory</p> <p>2 increases in price?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: The language of SSNIP appears in</p> <p>5 the Simonson report, and so I did offer rebuttal</p> <p>6 opinions related to the suitability of Dr. Simonson's</p> <p>7 survey to estimate those.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. Did you yourself perform a SSNIP test?</p> <p>10 A. No, I did not perform a SSNIP test.</p> <p>11 Q. In offering your opinions, did you perform any</p> <p>12 analysis on cross elasticity of demand?</p> <p>13 MR. RENARD: Objection to form.</p> <p>14 THE WITNESS: I did not.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. If part of your assignment were to perform an</p> <p>17 analysis on cross elasticity of demand between open web</p> <p>18 display advertising and any other product, would you</p> <p>19 know to do that?</p> <p>20 MR. RENARD: Objection to form.</p> <p>21 THE WITNESS: I would not know how to do it</p> <p>22 without probably a great deal of study.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. So I'm going to give you a hypothetical.</p> <p>25 Imagine that the cost of open web display advertising</p>	<p style="text-align: right;">Page 120</p> <p>1 increasing quality, increasing performance or anything</p> <p>2 like that, I do not see why open web display</p> <p>3 advertising, increasing price -- well, actually, sorry.</p> <p>4 I guess now that I'm thinking through it, yes, I can</p> <p>5 imagine a circumstance.</p> <p>6 So I'm imagining an advertiser for whom</p> <p>7 Display is a high-performing channel and a central part</p> <p>8 of their marketing strategy and the price increases and</p> <p>9 they have a fixed marketing budget and they don't want</p> <p>10 to change their Display spin for some business reasons.</p> <p>11 Then I could imagine them taking money from some other</p> <p>12 channel, if I'm understanding correctly.</p> <p>13 Q. Can you think of any other examples?</p> <p>14 MR. RENARD: Objection. Form.</p> <p>15 THE WITNESS: I mean, I think that was a</p> <p>16 family of examples since I mentioned other business</p> <p>17 reasons. So I think that all of my examples would fall</p> <p>18 under that umbrella as I sit here right now trying to</p> <p>19 think through this.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Holding all things equal, would you expect</p> <p>22 advertisers to respond to an increase in the price of</p> <p>23 open web display ads by placing fewer video ads?</p> <p>24 MR. RENARD: Objection. Form.</p> <p>25 THE WITNESS: I think that it's very hard for</p>
<p style="text-align: right;">Page 119</p> <p>1 increases. Are you with me?</p> <p>2 A. Yes. I think I will be asking for more</p> <p>3 specifics on this hypothetical.</p> <p>4 Q. Understood.</p> <p>5 Holding all things equal, would you expect</p> <p>6 that an increase in price of open web display</p> <p>7 advertising would cause a decrease in demand for other</p> <p>8 channels?</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: I do think that would depend on</p> <p>11 the specific circumstances.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Can you give me an example where an increase</p> <p>14 in price of open web display advertising would cause a</p> <p>15 decrease in demand for other channels?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: I'm just going to say this back</p> <p>18 to you to make sure I understand. So we're talking</p> <p>19 about open web display advertising prices going up and</p> <p>20 that resulting in a decrease in demand for other</p> <p>21 channels?</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Correct.</p> <p>24 A. If we are holding all else equal and so that</p> <p>25 price increase is not accompanied by things like</p>	<p style="text-align: right;">Page 121</p> <p>1 me to answer that question in the total abstract. The</p> <p>2 advertisers that I work with typically allocate those</p> <p>3 budgets separately, and so I don't think I have an</p> <p>4 expectation around what the advertiser would do with</p> <p>5 changes in price to display vis-à-vis their video</p> <p>6 channels.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. In your view, are hot dogs and hamburgers</p> <p>9 substitutes?</p> <p>10 MR. RENARD: Objection. Form.</p> <p>11 THE WITNESS: No. My partner loves plain hot</p> <p>12 dogs in a way that I cannot get my head around and I</p> <p>13 love hamburgers in a way that she seems not able to</p> <p>14 understand.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Okay. So let's hang on that for a moment. So</p> <p>17 based on your answer, why is it your view that hot dogs</p> <p>18 and hamburgers are not substitutes?</p> <p>19 MR. RENARD: Objection. Form.</p> <p>20 THE WITNESS: Let me just begin by saying I'm</p> <p>21 not an economist and I'm not trying to offer opinions on</p> <p>22 whether or not these two foods constitute some sort of</p> <p>23 market. I don't think they're substitutable because I</p> <p>24 think they provide different forms of gustatory</p> <p>25 pleasure. And so the reason you would say hot dogs and</p>

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<p>1 hamburgers are not substitutes is because they taste</p> <p>2 different. Is that fair?</p> <p>3 MR. RENARD: Objection. Form.</p> <p>4 THE WITNESS: Not just taste. I think</p> <p>5 esthetics enter into it. I think -- I think the amount</p> <p>6 of calories typically in a hotdog versus a hamburger are</p> <p>7 different. I like the number of accouterments you can</p> <p>8 add to a hamburger. I like those better than the ones</p> <p>9 you can add to a hotdog.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Can you think of any two products that are</p> <p>12 substitutes?</p> <p>13 MR. RENARD: Objection. Form.</p> <p>14 THE WITNESS: Yes.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Can you give me an example?</p> <p>17 A. I think that PC laptops are generally</p> <p>18 substitutable if we are conditioning on similar monitor</p> <p>19 size, hard drive capacity, and CPU power.</p> <p>20 Q. Why?</p> <p>21 MR. RENARD: Objection to the form.</p> <p>22 THE WITNESS: Because the way that I use my</p> <p>23 laptop would be essentially unchanged if I switched from</p> <p>24 an Acer laptop to a similarly provisioned Lenovo laptop.</p> <p>25</p>	<p>1 MR. ROSSON: Yeah, that's fine.</p> <p>2 MR. RENARD: Okay.</p> <p>3 THE VIDEOGRAPHER: Okay.</p> <p>4 This is the end of Media 3. We are going off</p> <p>5 the record at 12:42 p.m.</p> <p>6 (LUNCH RECESS)</p> <p>7 THE VIDEOGRAPHER: This is the start of</p> <p>8 Media File 4. We are back on the record at 1:24 p.m.</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Dr. Chandler, are you ready to proceed?</p> <p>11 A. I am.</p> <p>12 Q. Any testimony from today that you'd like to</p> <p>13 change or correct?</p> <p>14 A. No.</p> <p>15 Q. Do you agree that advertisers can track the</p> <p>16 performance of the money they spend on digital</p> <p>17 advertisements?</p> <p>18 A. I think it depends on the context.</p> <p>19 Q. Tell me what you mean by, "it depends on the</p> <p>20 context."</p> <p>21 A. Well, I think it depends on the definition</p> <p>22 we're using of "track" and the definition we're using of</p> <p>23 "performance." For instance, one common measure of</p> <p>24 performance in open web display advertising is the</p> <p>25 conversion rate, the number of conversions divided by</p>
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<p>1 BY MR. ROSSON:</p> <p>2 Q. As you use the term, can products that have</p> <p>3 differences be substitutes?</p> <p>4 MR. RENARD: Objection to form.</p> <p>5 THE WITNESS: Yes. I mean, I think that those</p> <p>6 laptops have differences. Similarly, maybe articles of</p> <p>7 clothing clearly seem substitutable to me. A button-</p> <p>8 down shirt in a lot of ways is a button-down shirt and</p> <p>9 there's differences in price and quality, but from my</p> <p>10 perspective, largely substitutable.</p> <p>11 Q. Does your definition of "substitutability"</p> <p>12 account for price or quality?</p> <p>13 MR. RENARD: Objection. Form.</p> <p>14 THE WITNESS: Yes. If we're talking about</p> <p>15 advertising, then price is an important consideration</p> <p>16 for marketers. The quality relates to the quality of</p> <p>17 the audience that can be reached, the quality of the</p> <p>18 creative that can be shown, and the quality of the</p> <p>19 context. And so I think price and quality are</p> <p>20 components of substitutability in that sense.</p> <p>21 MR. RENARD: Mr. Rosson, we -- whenever you're</p> <p>22 at a convenient breaking point, I think we're close to</p> <p>23 having lunch ready.</p> <p>24 MR. ROSSON: Now is fine.</p> <p>25 MR. RENARD: Now?</p>	<p>1 the number of impressions. In search advertising, the</p> <p>2 number of impressions is not known. So that would be an</p> <p>3 example where an advertiser could not track the</p> <p>4 performance of digital advertising.</p> <p>5 Q. I'm looking at your opening report,</p> <p>6 Paragraph 91.</p> <p>7 The first sentence says, "Advertisers make</p> <p>8 tradeoffs among these aspects to find pieces of</p> <p>9 marketing that provide a positive return on investment</p> <p>10 or return on ad spend."</p> <p>11 Do you see that?</p> <p>12 A. I do.</p> <p>13 Q. And when you write "these aspects," what are</p> <p>14 you referring to?</p> <p>15 A. In this subsection, I'm talking about pricing.</p> <p>16 And so the previous paragraphs talk about the costs of</p> <p>17 "video advertising." Then -- that's Paragraph 88.</p> <p>18 Paragraph 89 talks about "display advertising</p> <p>19 costs." And then there's a discussion of</p> <p>20 "industry-specific variations" in price.</p> <p>21 And so what I mean by "these aspects" is the</p> <p>22 price aspects of the different channels. So that is one</p> <p>23 component of the ROI or ROAS calculation.</p> <p>24 Q. Marketers "make tradeoffs among the price of</p> <p>25 digital advertising channels to find pieces of marketing</p>

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<p>1 that provide a positive return on investment or return</p> <p>2 on ad spend."</p> <p>3 Do I have that right?</p> <p>4 A. Yes.</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: Sorry.</p> <p>7 Yes, that's what Paragraph 91 begins with.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. Have you ever helped an advertiser compare the</p> <p>10 bang for their buck they're getting across different</p> <p>11 advertising channels?</p> <p>12 MR. RENARD: Objection. Form.</p> <p>13 THE WITNESS: Yes, I've done a great deal of</p> <p>14 work on that, both as a consultant, then also while at</p> <p>15 Microsoft and at aQuantive, and as part of my</p> <p>16 dissertation research.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. So at Data Insights -- I know we talked about</p> <p>19 this this morning. I just have a few more questions</p> <p>20 about it. Are you with me?</p> <p>21 A. Yes.</p> <p>22 Q. Okay.</p> <p>23 Is one service you provide looking at</p> <p>24 advertisers' spend to help them understand where their</p> <p>25 money's being best used?</p>	<p>1 mechanics themselves, and I can potentially see the</p> <p>2 influence of those mechanics as part of the data.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Are you more often giving your clients</p> <p>5 qualitative or quantitative advice?</p> <p>6 MR. RENARD: Objection. Form.</p> <p>7 THE WITNESS: I would say it's a blend of the</p> <p>8 two.</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. And when you're giving them qualitative</p> <p>11 advice, without regard to a specific client, can you</p> <p>12 give me a general idea of what you mean by providing</p> <p>13 qualitative advice?</p> <p>14 A. Yes. I mean, I think that can encompass a</p> <p>15 very wide array of things from the way in which they've</p> <p>16 set up their marketing and data science teams, the way</p> <p>17 in which they've structured their data collection, and</p> <p>18 the way in which they use that data both internally</p> <p>19 within the organization and as it relates to my work.</p> <p>20 Also, I help them with things like which</p> <p>21 marketing channels may align with their goals, the</p> <p>22 measurement of those goals and advice on, for instance,</p> <p>23 brand recall and favorability, and how we might message</p> <p>24 most effectively to influence those, and then all the</p> <p>25 way to things like the way in which the client presents</p>
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<p>1 A. I would say it's the combination of spend and</p> <p>2 performance to assess the efficacy of their marketing.</p> <p>3 Q. So you're measuring advertiser spend and</p> <p>4 advertiser performance to understand how effective their</p> <p>5 marketing is; is that right?</p> <p>6 A. Yes, in sort of broad terms, that's what I'm</p> <p>7 doing.</p> <p>8 Q. And does that work that you perform have</p> <p>9 anything to do with the auction mechanics on the</p> <p>10 exchanges that your clients are trading in?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: Potentially.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. How so?</p> <p>15 A. The auction mechanics partially define both</p> <p>16 the performance and the cost of the marketing. And so</p> <p>17 the auction mechanics can influence the two principal</p> <p>18 pieces of marketing performance.</p> <p>19 Q. So are auction mechanics something that you</p> <p>20 need to be up to date on to advise your clients about</p> <p>21 their marketing plans?</p> <p>22 MR. RENARD: Objection. Form.</p> <p>23 THE WITNESS: Generally speaking. Also, I'm</p> <p>24 typically analyzing data coming out of the auctions.</p> <p>25 And so many times my analysis is downstream from the</p>	<p>1 their marketing within the organization and externally</p> <p>2 outside the organization to do what we would call</p> <p>3 thought leadership.</p> <p>4 Q. And does the advice you provide</p> <p>5 including [verbatim] making a recommendation of whether</p> <p>6 that client should use AdX versus some other exchange?</p> <p>7 A. Sometimes.</p> <p>8 Q. Sometimes an advertiser will spend its</p> <p>9 marketing budget differently based on your</p> <p>10 recommendation, correct?</p> <p>11 A. Yes.</p> <p>12 Q. They might put more money into one channel and</p> <p>13 less money in a different channel, right?</p> <p>14 A. Typically when it comes to channel allocation</p> <p>15 decisions, I am providing models and tools for the</p> <p>16 marketer to use as an input into their decision-making</p> <p>17 process regarding budget allocation.</p> <p>18 Q. And ultimately in a budget allocation process,</p> <p>19 an advertiser might decide to put more advertising</p> <p>20 dollars into one channel versus another; is that right?</p> <p>21 A. Yes, typically marketers have variability in</p> <p>22 their budget allocation across channels.</p> <p>23 Q. So they might choose to do more in display ads</p> <p>24 or -- and fewer in social media, for example? Is that</p> <p>25 what you're talking about?</p>

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<p style="text-align: right;">Page 130</p> <p>1 MR. RENARD: Objection. Form.</p> <p>2 THE WITNESS: Yes. Generally speaking, my</p> <p>3 clients will use the insights generated by my models to</p> <p>4 determine their return on investment and return on ad</p> <p>5 spend both within and across channels, and use that to</p> <p>6 inform budget allocation decisions, which are also</p> <p>7 driven partially by other business considerations.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. In your opinions you discuss how what you</p> <p>10 referred to as different channels typically have</p> <p>11 different price points; is that right?</p> <p>12 A. That's right. Generally speaking, there is</p> <p>13 price variability both within and between marketing</p> <p>14 channels.</p> <p>15 Q. And so when you analyze whether open web</p> <p>16 display advertising is substitutable for any other</p> <p>17 channel, what steps did you take to control for</p> <p>18 differences in price among the channels?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: When you say, did I take, are</p> <p>21 you describing in my report, or are you talking</p> <p>22 generally more in my consulting?</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. In your report.</p> <p>25 A. Can you repeat that question for me?</p>	<p style="text-align: right;">Page 132</p> <p>1 in a positive way and just let me know if I've</p> <p>2 misunderstood the negatives in that.</p> <p>3 For instance, Connected TV tends to be about</p> <p>4 twice as expensive as premium social media placements.</p> <p>5 If I was analyzing an advertiser's data and saw that at</p> <p>6 twice the cost, Connected TV was driving twice the</p> <p>7 return, then the cost per action would be the same, and</p> <p>8 cost per action would not be a reason to differentiate</p> <p>9 between the channels.</p> <p>10 Am I answering your question?</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Yes. Thank you.</p> <p>13 And so in opining that open web display</p> <p>14 advertising is not a substitute for other media</p> <p>15 channels, did you perform a cost per action analysis to</p> <p>16 normalize the price of the various channels?</p> <p>17 MR. RENARD: Objection. Form.</p> <p>18 THE WITNESS: The only place, as far as I</p> <p>19 know, where I speak specifically to substitutability is</p> <p>20 in my rebuttal report, and there I am synthesizing my</p> <p>21 industry experience when I make statements about</p> <p>22 substitutability and how in my experience working with</p> <p>23 hundreds of advertisers, how I see them treat those</p> <p>24 channels, among other aspects that I elucidate in that</p> <p>25 report.</p>
<p style="text-align: right;">Page 131</p> <p>1 Q. Sure.</p> <p>2 Did you perform any analysis to determine</p> <p>3 whether quality differences among channels are explained</p> <p>4 by their difference in price?</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: I am a little bit confused. I'm</p> <p>7 not sure what it would mean for price to explain the</p> <p>8 quality difference. So would that mean that</p> <p>9 Connected TV costs more and there -- yeah, I think that</p> <p>10 inverts the cause and effect relationship between price</p> <p>11 and quality.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Imagine two products where one is twice as</p> <p>14 expensive and has twice the quality of the first one.</p> <p>15 Are you with me?</p> <p>16 A. Yes. Could we make it more concrete and talk</p> <p>17 about a specific product or...?</p> <p>18 Q. We might get there.</p> <p>19 A. Okay.</p> <p>20 Q. Holding all things equal, you would agree with</p> <p>21 me that the difference in price between those two</p> <p>22 products would not lead you to conclude that they're not</p> <p>23 substitutes, right?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I'm going to try to state this</p>	<p style="text-align: right;">Page 133</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Did you perform a quantitative analysis to</p> <p>3 normalize price differences among channels in offering</p> <p>4 any opinions about substitutability?</p> <p>5 MR. RENARD: Same objection.</p> <p>6 THE WITNESS: The only opinions I'm offering</p> <p>7 specifically about substitutability are in that rebuttal</p> <p>8 report, and the only quantitative analysis I did in that</p> <p>9 report is not related to price.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. For any of your analysis, did you do a t-test?</p> <p>12 MR. RENARD: Objection to form.</p> <p>13 THE WITNESS: I did not have a situation where</p> <p>14 I needed to compare the means of two different groups,</p> <p>15 and so I did not do a t-test.</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. You know what a t-test is, correct?</p> <p>18 A. I do know what a t-test is.</p> <p>19 Q. Did you Z-score any data that was provided to</p> <p>20 you?</p> <p>21 MR. RENARD: Same objection.</p> <p>22 THE WITNESS: No. The -- I did not perform a</p> <p>23 null hypothesis test of any flavor as part of my reports</p> <p>24 because that was not needed to form my opinions.</p> <p>25</p>

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<p style="text-align: right;">Page 134</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Did you apply any statistical tests that would</p> <p>3 typically be taught in a --</p> <p>4 THE REPORTER: I'm sorry. Can you repeat</p> <p>5 that? I didn't hear you.</p> <p>6 MR. ROSSON: Yes.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. In offering your opinions, did you utilize any</p> <p>9 statistical tests that would be taught in graduate-level</p> <p>10 statistical courses?</p> <p>11 A. The sense in which I applied a statistical</p> <p>12 test in graduate statistical courses would, I think,</p> <p>13 only be my text mining, which I did as part of my data</p> <p>14 synthesis as I was trying to prepare the materials in</p> <p>15 this case for my reports. But that was not a</p> <p>16 statistical test where I would do something like</p> <p>17 estimate parameters, estimate those standard errors, and</p> <p>18 then use those standard errors to do a statistical test</p> <p>19 on whether or not the parameters could be zero, for</p> <p>20 instance.</p> <p>21 THE REPORTER: Could be what? Sorry.</p> <p>22 THE WITNESS: Could be zero.</p> <p>23 THE REPORTER: Thank you.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. For your opening report, would you be able to</p>	<p style="text-align: right;">Page 136</p> <p>1 statistical training.</p> <p>2 Q. Can we agree that setting aside the text</p> <p>3 mining, you didn't use any of your statistical training</p> <p>4 to perform a data analysis in offering your opinions?</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: Again, I would probably state it</p> <p>7 differently and say that my data science training gives</p> <p>8 me my industry experience which is what I'm using to</p> <p>9 synthesize this information. And so in that sense, I am</p> <p>10 using the statistical training as part of my opinions.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Let me ask an open-ended question. Can you</p> <p>13 show me which opinions that you're offering in this case</p> <p>14 in your opening report rely on statistical analysis?</p> <p>15 MR. RENARD: Objection to form.</p> <p>16 THE WITNESS: If we are using statistical</p> <p>17 analysis in the sense of part of my statistical</p> <p>18 training, then I think nearly all of my opinions in my</p> <p>19 opening report derive from that statistical training.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Okay. I'm going to move on to a different</p> <p>22 topic.</p> <p>23 Did you speak with Professor Gans about ad</p> <p>24 buying tools?</p> <p>25 A. I had a conversation with Professor Gans --</p>
<p style="text-align: right;">Page 135</p> <p>1 offer all of your opinions if you had no background in</p> <p>2 statistics?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: I don't believe so.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. Which ones would you be unable to offer?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: It is very hard for me to</p> <p>9 separate my data science background from my marketing</p> <p>10 background since I have principally interacted with</p> <p>11 marketing and digital marketing through the lens of data</p> <p>12 science, and so the industry experience that I am</p> <p>13 bringing to bear to form these opinions is part and</p> <p>14 parcel with my data science background. And so I think</p> <p>15 someone without statistical training would not be in my</p> <p>16 position to offer these opinions.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. By virtue of the consideration that they</p> <p>19 wouldn't have your industry experience?</p> <p>20 A. They wouldn't have my particular industry</p> <p>21 experience. One thing that I really like about being a</p> <p>22 data scientist in marketing is the opportunity to work,</p> <p>23 you know, not with one advertiser at a time, but maybe</p> <p>24 with dozens of advertisers at the same time via their</p> <p>25 data. And so I think my experience is related to my</p>	<p style="text-align: right;">Page 137</p> <p>1 MR. RENARD: Dr. Chandler, I just -- that's a</p> <p>2 yes or no.</p> <p>3 THE WITNESS: Oh.</p> <p>4 MR. RENARD: In fact, let me, to that</p> <p>5 question, object to it on the basis of the stipulation</p> <p>6 and order regarding experts and instruct you not to</p> <p>7 answer the question.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. On that basis, are you not going to answer the</p> <p>10 question?</p> <p>11 A. Yes.</p> <p>12 Q. Did you tell Professor Gans that, quote,</p> <p>13 industry participants consider ad buying tools for small</p> <p>14 advertisers to be a distinct product in a separate</p> <p>15 market from an industry perspective?</p> <p>16 MR. RENARD: Same objection. Same</p> <p>17 instruction.</p> <p>18 THE WITNESS: And I will also not be answering</p> <p>19 on the advice of counsel.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Okay.</p> <p>22 Are you aware of whether Professor Gans</p> <p>23 expressly relies on a conversation that he had with you</p> <p>24 and discloses it in his expert report?</p> <p>25 A. I'm aware that Professor Gans relies on a</p>

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<p style="text-align: right;">Page 138</p> <p>1 conversation with me.</p> <p>2 Q. Okay. Could you please tell me about the</p> <p>3 conversation he's relying on.</p> <p>4 MR. RENARD: That's off limits under the order</p> <p>5 regarding experts.</p> <p>6 And I'll instruct you not to answer the</p> <p>7 question.</p> <p>8 You can ask Dr. Gans that.</p> <p>9 MR. ROSSON: Okay.</p> <p>10 MR. RENARD: Which I think you're allowed to</p> <p>11 do under the stipulation and order regarding experts.</p> <p>12 MR. ROSSON: Okay. I'm going to ask one more</p> <p>13 question just to draw the line and then I'll move on.</p> <p>14 MR. RENARD: Sure.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Where were you when you had a conversation</p> <p>17 with Mr. Gans about ad buying tools?</p> <p>18 A. I was in my home office in Minneapolis.</p> <p>19 MR. ROSSON: And, Counsel, so that I don't</p> <p>20 just run down this again and again, is the line you're</p> <p>21 drawing that in this deposition I'm not entitled to</p> <p>22 learn the content of that communication?</p> <p>23 MR. RENARD: Yes, and I think specifically</p> <p>24 under the order regarding experts, conversations that</p> <p>25 Dr. Chandler had with consultants, other experts,</p>	<p style="text-align: right;">Page 140</p> <p>1 On Page 50, do you see a heading titled "The</p> <p>2 Bifurcation of Tools for Large Advertisers and Small</p> <p>3 Advertisers"?</p> <p>4 A. I do see that.</p> <p>5 Q. Okay.</p> <p>6 Other than Google Ads, what are other tools --</p> <p>7 what are other ad buying tools for small advertisers?</p> <p>8 A. Facebook Ads, Amazon Ads. Those are the</p> <p>9 primary ones for small advertisers in addition to</p> <p>10 Google Ads.</p> <p>11 Q. Okay. And are Facebook Ads and Amazon Ads in</p> <p>12 your view tools for small advertisers to buy open web</p> <p>13 display ad space?</p> <p>14 A. No.</p> <p>15 Q. So the only open web display ad small</p> <p>16 advertiser tool that you can name is Google Ads; is that</p> <p>17 correct?</p> <p>18 MR. RENARD: Objection. Form.</p> <p>19 THE WITNESS: The only open web display tool</p> <p>20 for small advertisers that I can think of is Google Ads.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. Other than Google Ads, can you give me</p> <p>23 examples of ad buying tools that offer robust targeting</p> <p>24 options and analytics?</p> <p>25 A. Yes.</p>
<p style="text-align: right;">Page 139</p> <p>1 lawyers are off limits. The only exception being to the</p> <p>2 extent an expert relies upon another expert, you can ask</p> <p>3 the expert who is relying on the other expert about that</p> <p>4 communication.</p> <p>5 MR. ROSSON: I see. So you're saying I can</p> <p>6 ask Professor Gans --</p> <p>7 MR. RENARD: Yes.</p> <p>8 MR. ROSSON: -- about the conversation?</p> <p>9 MR. RENARD: Yes.</p> <p>10 MR. ROSSON: All right.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Let's look at Page 50 of your opening report.</p> <p>13 MR. ROSSON: And just for the record, I think</p> <p>14 this is clear, I'm not agreeing with that</p> <p>15 interpretation.</p> <p>16 MR. RENARD: I understand.</p> <p>17 MR. ROSSON: But I'm just going to move on.</p> <p>18 MR. RENARD: I understand.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. Okay. Mr. Chandler, do you understand that</p> <p>21 now I'm not asking you about any conversations with</p> <p>22 another expert; I'm going to ask you about what's in</p> <p>23 your report? Do you understand?</p> <p>24 A. I do understand.</p> <p>25 Q. Okay.</p>	<p style="text-align: right;">Page 141</p> <p>1 MR. RENARD: Objection. Form.</p> <p>2 THE WITNESS: And just to clarify, we're now</p> <p>3 talking about advertisers of all sizes?</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Let me direct you to your report. So I'm</p> <p>6 looking at opening report Paragraph 177.</p> <p>7 Do you see that?</p> <p>8 A. I do.</p> <p>9 Q. And mid-way down the paragraph, it reads,</p> <p>10 "Google Ads offers features like Smart Campaigns, which</p> <p>11 simplify the ad creation process and provide robust</p> <p>12 targeting options and analytics."</p> <p>13 Do you see that?</p> <p>14 A. I do.</p> <p>15 Q. Okay.</p> <p>16 Can you give me examples of what you would</p> <p>17 consider small advertisers ad buying tools that offer</p> <p>18 robust targeting options and analytics?</p> <p>19 A. Yes. It would be the same list as before,</p> <p>20 Google Ads, Facebook Ads Manager, and Amazon Ads.</p> <p>21 Q. And for open web display ads specifically,</p> <p>22 your list would be Google Ads only; is that correct?</p> <p>23 A. That's correct.</p> <p>24 Q. Okay.</p> <p>25 And then let's expand this now. Can you give</p>

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<p style="text-align: right;">Page 142</p> <p>1 me a list of tools for small advertisers that do not 2 offer robust targeting options in analytics? 3 A. You know, there are some small players in 4 certain categories. Taboola is primarily native ads, I 5 believe, and I think the targeting and reporting 6 capabilities are much more limited, particularly for 7 small advertisers. 8 There is a tool called AppLovin, 9 A-p-p-L-o-v-i-n, that provides in-app capabilities. 10 And, again, for small advertisers, I don't believe it 11 provides the same level of reporting in analytics. 12 Those are the two that I can think of. 13 Q. Now I'm going to broaden to any advertiser. 14 Can you give me examples of ad buying tools that offer 15 robust targeting options in analytics? 16 A. DV360, Criteo, The Trade Desk. 17 Those other tools that I mentioned, Taboola, 18 and that's T-a-b-o-o-l-a, I believe, and AppLovin offer 19 tools for large advertisers as well. 20 Q. And is it your opinion that DV3 -- 21 A. Excuse me. Could I -- just thought of one 22 more. 23 Q. Oh, I'm sorry. Yeah. I'm sorry, I didn't 24 know -- 25 A. I was still thinking.</p>	<p style="text-align: right;">Page 144</p> <p>1 "customizable" here. 2 BY MR. ROSSON: 3 Q. I'll come back to that. 4 I'm looking at Paragraph 182 of your opening 5 report. Would you look at that, please. 6 A. I'm there. 7 Q. Okay. 8 Do you see your Footnote 76? 9 A. I do. 10 Q. And you see it tied to the body text that 11 says, [REDACTED] 12 [REDACTED] 13 A. I see that. 14 Q. Okay. 15 [REDACTED] 16 [REDACTED] 17 [REDACTED] 18 Q. Okay. 19 And your citation there is to an expert report 20 from the Eastern District of Virginia case; is that 21 right? 22 A. That's correct. In that section of Dr. Lee's 23 report, Dr. Lee analyzed customer data from Google and 24 produced a chart that showed the number of customers who 25 used each tool exclusively and then the two together.</p>
<p style="text-align: right;">Page 143</p> <p>1 Yahoo has a DSP, formerly Verizon. Over the 2 time period that we're discussing, 2013 to 2023, there 3 was a company called MediaMath that provided tools for 4 large advertisers, but I believe they went bankrupt in 5 2022 or 2023. 6 And that's all I can come up with right now. 7 Thank you. 8 Q. And so is it your position that DV360 [REDACTED] 9 [REDACTED] are not available to small advertisers? 10 MR. RENARD: Objection to form. 11 THE WITNESS: It's my experience in the 12 industry that small advertisers don't have the expertise 13 or time to use those tools. And so when I have seen 14 small advertisers placing advertisements through those 15 tools, it has been via intermediaries. 16 So for instance, I have a consulting client 17 that specializes in programmatic display. Some of their 18 customers are small businesses, but the actual 19 management of the campaigns is taking care of via and 20 this company functioning like an advertising agency 21 [REDACTED] [REDACTED]. 22 BY MR. ROSSON: 23 Q. Is Google Ads customizable? 24 MR. RENARD: Objection to form. 25 THE WITNESS: I'm not sure what we mean by</p>	<p style="text-align: right;">Page 145</p> <p>1 Q. And are you relying on Dr. Lee's analysis? 2 MR. RENARD: Objection to form. 3 THE WITNESS: I have carried out that analysis 4 independently to verify his conclusions. I believe I'm 5 using the correct pronoun. So I am citing to Dr. Lee's 6 chart, but I have independently verified the information 7 in that chart. 8 BY MR. ROSSON: 9 Q. Where can I find your analysis? 10 MR. RENARD: Objection to form. 11 THE WITNESS: I did this as part of my 12 preparation for this deposition. 13 BY MR. ROSSON: 14 Q. Had you performed such analysis at the time 15 you issued your opening report? 16 A. I had not. 17 Q. Okay. 18 Other than Dr. Lee's expert report and the 19 work you performed yourself that you just described, is 20 there anything else in your experience or research to 21 indicate to you how common it is for an advertiser to 22 use DV360 and Google Ads? 23 A. Yes. 24 Q. And what is that? 25 A. I've worked with a number of large advertisers</p>

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<p>1 who use both tools. And in the bulleted list in</p> <p>2 Paragraph 182, I describe some of the reasons why in my</p> <p>3 experience large advertisers tend to use both.</p> <p>4 Q. Did your experience allow you to conclude that</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 A. The information that I'm citing to you here is</p> <p>8 consistent with my experience. The specific numerical</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]. But that</p> <p>11 number seems about right to me based on the advertisers</p> <p>12 that I've worked with.</p> <p>13 Q. Without Dr. Lee's analysis, would you be able</p> <p>14 to [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 MR. RENARD: Objection. Form.</p> <p>17 THE WITNESS: I think without the information</p> <p>18 provided to Dr. Lee, my opinion might be modified</p> <p>19 somewhat to say something like a significant proportion</p> <p>20 of large advertisers use both or something a little less</p> <p>21 specific.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. If Google Ads raised its prices or decreased</p> <p>24 its quality, do you agree that advertisers using both</p> <p>25 DV360 and Google Ads would shift SSPIN to DV360?</p>	<p>1 consider large but they are not behemoths, I would say</p> <p>2 it is uncommon and for small advertisers, they're not</p> <p>3 using DV360 so I think it doesn't apply.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. What's the basis for those estimates?</p> <p>6 A. That's based on my experience.</p> <p>7 Q. Do you believe that your clients at</p> <p>8 Data Insights are a representative sample of the ad</p> <p>9 buyer and ad seller population at large?</p> <p>10 MR. RENARD: Objection. Form.</p> <p>11 THE WITNESS: I think it would depend on</p> <p>12 specifically what we're trying to measure, but if we're</p> <p>13 talking about the overall advertising market, I would</p> <p>14 say my sample is more representative of the large</p> <p>15 advertisers, but I have a large sample size at both</p> <p>16 large and small.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. When you delineate between large and small</p> <p>19 advertisers, can you give me an idea of how you're</p> <p>20 defining those two categories?</p> <p>21 A. Yes. I think about this in terms of in the</p> <p>22 context of this case the needs that those advertisers</p> <p>23 have. As I mention in the report, small advertisers</p> <p>24 tend to have someone managing their marketing who maybe</p> <p>25 it's not their full-time job or maybe there's only one</p>
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<p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: No, I would probably not agree</p> <p>3 with that.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Do you have an opinion one way or the other</p> <p>6 whether demand for DV360 or Google Ads changes when the</p> <p>7 quality or price of one of them changes?</p> <p>8 MR. RENARD: Objection. Form.</p> <p>9 THE WITNESS: No, I'm not offering an opinion</p> <p>10 on that.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Okay.</p> <p>13 Is it true that advertisers use other ad</p> <p>14 buying tools in addition to Google Ads? DV360?</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: Some advertisers use additional</p> <p>17 buying tools.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. What's the proportion of users of DV360 and</p> <p>20 Google Ads that also use an additional tool?</p> <p>21 MR. RENARD: Same objection.</p> <p>22 THE WITNESS: I think it depends on the size</p> <p>23 of the advertiser. I think for the very largest</p> <p>24 advertisers probably the best I can say right now is</p> <p>25 it's not uncommon. For advertisers that I would</p>	<p>1 person who's handling all marketing and so those</p> <p>2 advertisers need a very streamlined process to transact</p> <p>3 in the advertising marketplace.</p> <p>4 Generally speaking, those advertisers tend to</p> <p>5 have smaller budgets, but I have worked with advertisers</p> <p>6 I would consider small that had quite large budgets;</p> <p>7 they just spent a ton in one channel or something.</p> <p>8 Large advertisers tend to have large budgets</p> <p>9 and large teams and need a great deal of what I might</p> <p>10 call enterprise class functionality, managing multiple</p> <p>11 log-ins, multiple channels, many creatives making</p> <p>12 omni-channel marketing decisions across those channels</p> <p>13 and operating at a much higher level of sophistication</p> <p>14 and taking advantage of much more sophisticated</p> <p>15 targeting options, and so that's how I come to this</p> <p>16 definition of large and small.</p> <p>17 Q. In Paragraph 182 of your opening report, the</p> <p>18 first bullet point, the beginning reads, "Access to</p> <p>19 search: the overwhelming reason for large, sophisticated</p> <p>20 advertisers who use DV360 to also use Google Ads is to</p> <p>21 participate in Google's search marketing."</p> <p>22 Do you see that?</p> <p>23 A. I do.</p> <p>24 Q. And you have no citation there, correct?</p> <p>25 A. That is correct.</p>

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<p>1 Q. What's the basis for the assertion?</p> <p>2 A. The basis is my experience working with these</p> <p>3 large advertisers. Google makes a tool for large</p> <p>4 advertisers to use search called SA360. But in my</p> <p>5 experience, most marketers find the interface for Google</p> <p>6 Ads to buy search more robust and efficient, and so for</p> <p>7 these large advertisers it is worth it to have members</p> <p>8 of their team who specialize in Google Ads to perform</p> <p>9 large-scale search campaigns.</p> <p>10 Q. Are you relying on anything other than your</p> <p>11 industry experience?</p> <p>12 MR. RENARD: Objection. Form.</p> <p>13 THE WITNESS: As it relates to this bullet</p> <p>14 point, no, I'm relying on my industry experience.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Other than you, can you tell me of someone in</p> <p>17 the AdTech space that believes ad buying tools for small</p> <p>18 advertisers are a distinct product in a separate market</p> <p>19 compared to advertising tools for large advertisers?</p> <p>20 A. I would suspect that most advertisers would</p> <p>21 identify DV360 and Google Ads as distinct products. And</p> <p>22 the extent to which they exist in a separate market</p> <p>23 might be a question for an economist, but if you asked</p> <p>24 an advertiser do these products do different things, I</p> <p>25 think they would say yes.</p>	<p>1 A. Would this also include white papers internal</p> <p>2 to companies or only public facing?</p> <p>3 Q. Public facing and, you know, blog posts,</p> <p>4 insights, thought leadership papers, et cetera.</p> <p>5 Are you with me?</p> <p>6 A. Yes.</p> <p>7 Q. Okay.</p> <p>8 Before this case, had you ever written</p> <p>9 something to the effect that ad buying tools for small</p> <p>10 advertisers are a distinct product in a separate market</p> <p>11 from advertising tools for large advertisers?</p> <p>12 A. I have not written anything publicly that</p> <p>13 would fit that description.</p> <p>14 Q. Okay. Are you aware of anyone else writing</p> <p>15 something publicly that would fit that description?</p> <p>16 A. I have vague recollections of some trade press</p> <p>17 articles talking about the different product features.</p> <p>18 It might have been ClickZ writing about the difference</p> <p>19 between DV360 and Google Ads, or Digiday, but I can't</p> <p>20 recall with precision right now.</p> <p>21 Q. Those industry publications wouldn't be</p> <p>22 analyzing whether tools are distinct to the product</p> <p>23 market, would they?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I think that those publications</p>
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<p>1 Q. You said "I would suspect" at the beginning of</p> <p>2 your answer. Do you remember that?</p> <p>3 A. I do.</p> <p>4 Q. Do you know anyone else who claims that ad</p> <p>5 buying tools for small advertisers are a distinct</p> <p>6 product and separate market from advertising tools for</p> <p>7 large advertisers?</p> <p>8 A. Yes.</p> <p>9 Q. Okay. Don't reveal anything from counsel;</p> <p>10 don't reveal communications with experts. Can you tell</p> <p>11 me who that is?</p> <p>12 A. I can think of several conversations I've had</p> <p>13 with clients where they have described Google and DV360</p> <p>14 as separate products. Partially when I have asked them,</p> <p>15 "Could we streamline our tech stack by working with only</p> <p>16 one of Google's advertiser tools," and they have</p> <p>17 explained the unique features of the two different</p> <p>18 tools.</p> <p>19 Q. So now I want to turn to your own history of</p> <p>20 publication, anything you've published to the market</p> <p>21 academically or as a professional.</p> <p>22 Do you understand?</p> <p>23 A. Okay. So we're talking peer-reviewed</p> <p>24 literature and also white papers?</p> <p>25 Q. Exactly. Or --</p>	<p>1 would be talking about the benefits and audiences of</p> <p>2 those two different products and distinguishing between</p> <p>3 the use and the types of customers that the products</p> <p>4 have, and I'm not sure if that fits the definition of</p> <p>5 "product market."</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. Okay. Other than the ClickZ article and the</p> <p>8 other one you mentioned, does anything come to mind in</p> <p>9 terms of public materials that would indicate small</p> <p>10 advertiser tools and large advertiser tools are two</p> <p>11 different markets?</p> <p>12 MR. RENARD: Objection to form.</p> <p>13 THE WITNESS: In my rebuttal report, I cite a</p> <p>14 paper by Hal Singer, and I can't remember the other</p> <p>15 author's name. It's either H-o-h-n or K-o-h-n, I think,</p> <p>16 that talks about the difference between -- my</p> <p>17 recollection is it talks about the difference between</p> <p>18 large ad buying tools like DV360, and the version of</p> <p>19 Google Ads that was primarily just Search and AdSense,</p> <p>20 and distinguishes between those, and I believe</p> <p>21 distinguishes between them as product markets. That's</p> <p>22 the only other thing that comes to mind right now.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. I'm going to shift gears and ask you some</p> <p>25 questions about conflicts of interest, okay?</p>

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<p style="text-align: right;">Page 154</p> <p>1 A. Okay.</p> <p>2 Q. Are you aware of any deceptive trade practice</p> <p>3 statutes that use the term "conflict of interest"?</p> <p>4 MR. RENARD: Objection. Form.</p> <p>5 THE WITNESS: I am not a lawyer and I don't</p> <p>6 believe I can tell you anything directly about deceptive</p> <p>7 trade practice statutes, including whether or not they</p> <p>8 include the term "conflict of interest."</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Okay. You don't know whether deceptive trade</p> <p>11 practice statutes include the term "conflict of</p> <p>12 interest"?</p> <p>13 A. I do not.</p> <p>14 Q. Do you agree that since -- excuse me.</p> <p>15 Do you agree that since at least 2013, it's</p> <p>16 been widely known that Google operates AdX?</p> <p>17 A. Yes.</p> <p>18 Q. Are you aware of Google trying to keep that a</p> <p>19 secret?</p> <p>20 A. No, I'm not.</p> <p>21 Q. Do you agree that since at least 2013, it's</p> <p>22 been widely known that Google provides services to ad</p> <p>23 buyers?</p> <p>24 A. I agree with that.</p> <p>25 Q. Are you aware of Google trying to keep that a</p>	<p style="text-align: right;">Page 156</p> <p>1 industry would have changed their behavior. I think</p> <p>2 that constitutes a conflict of interest, and as we were</p> <p>3 discussing earlier, taking advantage of that conflict of</p> <p>4 interest.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. I'm looking at Paragraph 374 of your opening</p> <p>7 report. Let me know when you're there.</p> <p>8 A. I'm there.</p> <p>9 Q. The second sentence reads -- pardon me. The</p> <p>10 third sentence reads, "Conflicts arise when the party</p> <p>11 with control of material information or functionality</p> <p>12 discriminates among participants, violating expectations</p> <p>13 of fairness and impartiality."</p> <p>14 Do you see that?</p> <p>15 A. I do.</p> <p>16 Q. Where did this definition of a "conflict of</p> <p>17 interest" come from?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: I'm not sure if I'm offering</p> <p>20 this sentence as a definition of conflict of interest.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. All right. Let me clarify then.</p> <p>23 What is the basis for your position that,</p> <p>24 "Conflicts arise when the party with control of material</p> <p>25 information or functionality discriminates among</p>
<p style="text-align: right;">Page 155</p> <p>1 secret?</p> <p>2 A. I am not aware of Google trying to keep that a</p> <p>3 secret.</p> <p>4 Q. Do you agree that since at least 2013, it's</p> <p>5 been widely known that Google provides services to ad</p> <p>6 sellers?</p> <p>7 A. I am aware of that.</p> <p>8 Q. Are you aware of Google trying to keep that a</p> <p>9 secret?</p> <p>10 A. No. I think, as my report makes clear, it is</p> <p>11 the interoperability between these and the way in which</p> <p>12 Google leveraged that was kept a secret.</p> <p>13 Q. The fact that Google operates AdX and provides</p> <p>14 services to ad buyers and sellers has been known to the</p> <p>15 market since at least 2013, right?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: Yes.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. What part of Google's alleged conflict of</p> <p>20 interest would you say was not known to the market?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: I think the way in which</p> <p>23 operating these multiple lines of businesses allowed</p> <p>24 Google to engage in practices that were not known to the</p> <p>25 industry. And had they been known, people in the</p>	<p style="text-align: right;">Page 157</p> <p>1 participants, violating expectations of fairness and</p> <p>2 impartiality"?</p> <p>3 A. The basis for my understanding of fairness and</p> <p>4 impartiality comes primarily from my industry experience</p> <p>5 and my participation in auctions in digital marketing</p> <p>6 both from the buy side and the sell side, and the way in</p> <p>7 which the practices carried out by those businesses</p> <p>8 would change if they were aware of ways in which</p> <p>9 Google's conduct restricts the flow of information or</p> <p>10 discriminates among the participants in the auction.</p> <p>11 Q. When you write, "Conflicts arise when the</p> <p>12 party with control of material information or</p> <p>13 functionality discriminates among participants,</p> <p>14 violating expectations of fairness and impartiality," is</p> <p>15 that a statement that you consider true only as to</p> <p>16 Google?</p> <p>17 A. In this case, I have information about</p> <p>18 Google's conducts, and so I'm making this statement</p> <p>19 primarily through that lens. The general principle I</p> <p>20 think is true regardless, but I don't have knowledge of</p> <p>21 that kind of behavior in other cases.</p> <p>22 Q. If I want to test whether it's true, that</p> <p>23 conflicts arise when the party with control of material</p> <p>24 information or functionality discriminates among</p> <p>25 participants, violating expectations of fairness and</p>

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<p style="text-align: right;">Page 158</p> <p>1 impartiality, can you point me to any peer-reviewed</p> <p>2 literature that would help me?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: I don't believe off the top of</p> <p>5 my head I can point you to peer-reviewed literature that</p> <p>6 can help you. Certainly there's ample deposition</p> <p>7 testimony that speaks to this.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. In what regard?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: In my rebuttal report, I cite a</p> <p>12 number of depositions where market participants were</p> <p>13 asked about expectations of fairness and transparency.</p> <p>14 And so I believe that that testimony speaks to these</p> <p>15 expectations and the ways in which, when compared to</p> <p>16 Google's conducts, those expectations are violated.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. But what about the inferential belief that if</p> <p>19 expectations are violated, it's a conflict of interest?</p> <p>20 How do you know that?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: I think that what I am trying to</p> <p>23 capture with this sentence is that the conflict of</p> <p>24 interest that Google has operating on the buy side and</p> <p>25 on the sell side as the exchange led to these violations</p>	<p style="text-align: right;">Page 160</p> <p>1 transaction and the other side; is that right?</p> <p>2 A. And where tho- --</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: Oh, excuse me.</p> <p>5 And where those are in conflict. As I mention</p> <p>6 in my report, in the previous section, generally</p> <p>7 speaking, advertisers are trying to acquire the highest</p> <p>8 quality audience at the lowest price to meet their</p> <p>9 business goals. And publishers are trying to monetize</p> <p>10 their inventory for the highest price. And so the</p> <p>11 conflict arises when Google has the ability to decide</p> <p>12 the extent to which each party gets their way versus the</p> <p>13 parties negotiating directly over that.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Can you point me to any literature not about</p> <p>16 whether a conflict has occurred, but on what a conflict</p> <p>17 of interest is?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: I don't believe I cite any</p> <p>20 documents giving a definition of a conflict of interest.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. Do you know of any?</p> <p>23 A. Not off the top of my head.</p> <p>24 Q. Do you know of any documents that would help</p> <p>25 the reader understand what a conflict of interest is?</p>
<p style="text-align: right;">Page 159</p> <p>1 of expectations.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. What is a conflict of interest?</p> <p>4 MR. RENARD: Objection to form.</p> <p>5 THE WITNESS: A conflict of interest in this</p> <p>6 case -- or this situation is where a party like Google</p> <p>7 has interests on one side of a transaction, for</p> <p>8 instance, on the buy side, and on the other side of the</p> <p>9 transaction, for instance, on the sell side. And</p> <p>10 throughout the documentation in this case, we see</p> <p>11 instances of Google disadvantaging one set of customers</p> <p>12 in preference for another set of customers. And so that</p> <p>13 is the conflict of interest I'm speaking about.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Am I correct that your definition of a</p> <p>16 conflict of interest is when a company has interests on</p> <p>17 one side of a transaction and on the other side?</p> <p>18 MR. RENARD: Objection. Form.</p> <p>19 THE WITNESS: Yes, sitting here today offering</p> <p>20 a lay definition of conflict of interest, that's how I</p> <p>21 think of it.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Okay.</p> <p>24 And so your opinions use the definition that a</p> <p>25 conflict of interest is an interest on one side of the</p>	<p style="text-align: right;">Page 161</p> <p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: The testimony in this case does</p> <p>3 speak to conflict of interest. So I'd perhaps point the</p> <p>4 reader toward that.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. Do you agree with me that in order to</p> <p>7 determine whether a conflict of interest occurred, you</p> <p>8 first have to know what a conflict of interest is?</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: Yes, I think that having a</p> <p>11 working definition of conflict of interest as I've just</p> <p>12 given you is part of classifying a situation as</p> <p>13 exhibiting a conflict of interest.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. And you got the working definition of a</p> <p>16 conflict of interest from the testimony in this case?</p> <p>17 A. I would point the reader to testimony in this</p> <p>18 case for independent verification of conflict of</p> <p>19 interest. My definition of conflict of interest is</p> <p>20 based on my working experience.</p> <p>21 Q. Your working experience supplied you with the</p> <p>22 definition of a conflict of interest?</p> <p>23 A. I developed my definition of a conflict of</p> <p>24 interest based on my work experience.</p> <p>25 Q. Do you know of a way we could scientifically</p>

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<p style="text-align: right;">Page 162</p> <p>1 test whether your definition of a conflict of interest</p> <p>2 is correct?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: I could imagine a survey to</p> <p>5 estimate whether or not my conflict of interest accords</p> <p>6 with others in a given industry.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Is that work you undertook?</p> <p>9 A. I did not. I am basing my description of</p> <p>10 conflicts of interest on my experience.</p> <p>11 Q. Are conflicts of interest -- let me ask this</p> <p>12 differently.</p> <p>13 If I took ten advertisers at random and ten</p> <p>14 publishers at random, do you think they would agree on a</p> <p>15 definition of what a conflict of interest is?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: I think in a purely abstract</p> <p>18 setting, I don't know. I think if given a description</p> <p>19 of a conduct, such as the conducts in this case, and if</p> <p>20 you asked ten advertisers and ten publishers if, say,</p> <p>21 Bernanke represents a conflict of interest, I think we</p> <p>22 would find agreement.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Can you say that with a reasonable degree of</p> <p>25 scientific certainty?</p>	<p style="text-align: right;">Page 164</p> <p>1 MR. RENARD: Mr. Rosson, whenever you're at a</p> <p>2 convenient break, I think we have been going about an</p> <p>3 hour.</p> <p>4 MR. ROSSON: That's fine. We can break now.</p> <p>5 THE VIDEOGRAPHER: This is the conclusion of</p> <p>6 Media 4. We are going off the record at 2:23 p.m.</p> <p>7 (RECESS TAKEN)</p> <p>8 THE VIDEOGRAPHER: This is the start of</p> <p>9 Media 5. We are back on the record at 2:44 p.m.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Dr. Chandler, any testimony from today that</p> <p>12 you would like to change or correct?</p> <p>13 A. No.</p> <p>14 Q. Could you look at Paragraph 377 of your</p> <p>15 opening report, please.</p> <p>16 A. Okay.</p> <p>17 Q. The second sentence reads, "Conduct benefiting</p> <p>18 Google's customers at the expense of competitors is</p> <p>19 conflicted when fairness is expected."</p> <p>20 Do you see that?</p> <p>21 A. I do.</p> <p>22 Q. Expected by whom?</p> <p>23 A. I would say expected in the market. So this</p> <p>24 paragraph is talking about advertisers. And the</p> <p>25 preferencing of, for instance, Google's DV360 customers</p>
<p style="text-align: right;">Page 163</p> <p>1 A. Yes.</p> <p>2 Q. And if we are to take the population of online</p> <p>3 advertisers and online publishers as a whole, what</p> <p>4 percentage of that population have you drawn your</p> <p>5 experience from?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: We went through the numbers</p> <p>8 earlier today. My experience among large advertisers,</p> <p>9 which maybe we could define by the top 100 advertising</p> <p>10 budgets, then my sample in the sense of the number that</p> <p>11 I have worked with is roughly 20 percent. If we're</p> <p>12 talking about small advertisers who, again, in my</p> <p>13 experience I think are a little bit further from the</p> <p>14 details of some of these conducts. My sample of small</p> <p>15 advertisers is much smaller. I estimated the number of</p> <p>16 small advertisers at 3 million, and I estimated that I</p> <p>17 had worked with 15- to 20,000.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. Do you agree that there are millions of</p> <p>20 advertisers who transacted on AdX from 2013 to 2023 who</p> <p>21 you've never spoken with?</p> <p>22 MR. RENARD: Objection to form.</p> <p>23 THE WITNESS: Yes. It is my estimate that</p> <p>24 millions of advertisers have used AdX, and I have not</p> <p>25 spoken to millions of them.</p>	<p style="text-align: right;">Page 165</p> <p>1 within AdX versus customers that are bidding into AdX</p> <p>2 from other ad buying tools, that would be a conflict of</p> <p>3 the expected fairness.</p> <p>4 Q. According to whom?</p> <p>5 A. According to the industry.</p> <p>6 Q. As a whole?</p> <p>7 A. Yes.</p> <p>8 Q. Based on what?</p> <p>9 A. Based on my experience of working with many</p> <p>10 advertisers who used DV360 and advertisers who used</p> <p>11 other tools like Criteo and The Trade Desk.</p> <p>12 Q. Would you agree that when you reference your</p> <p>13 industry experience, you're doing so anecdotally?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: No.</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. Did you make any effort to take surveys of</p> <p>18 publishers or advertisers to determine what they</p> <p>19 considered a conflict of interest?</p> <p>20 MR. RENARD: Objection. Form.</p> <p>21 THE WITNESS: I have been working with</p> <p>22 advertisers and publishers in these contexts for 25</p> <p>23 years, and so I have gathered data that way, but I did</p> <p>24 not take a survey as part of this work.</p> <p>25</p>

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<p style="text-align: right;">Page 166</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Did you take notes on the data you were</p> <p>3 collecting from publishers and advertisers as you went</p> <p>4 along through those 25 years?</p> <p>5 A. Certainly there were notes taken in the</p> <p>6 engagements with the publishers and advertisers that</p> <p>7 were part of the engagements with them.</p> <p>8 Q. Are you relying on those notes in offering</p> <p>9 your opinions?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: No.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Are you relying on your memories?</p> <p>14 A. I'm relying on my experience.</p> <p>15 Q. Is that experience documented somewhere that I</p> <p>16 can review it other than in your mind?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: My experience is described in my</p> <p>19 reports.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. From your experience described in your</p> <p>22 reports, I won't be able to know which specific</p> <p>23 advertisers or publishers you've spoken to, correct?</p> <p>24 A. I list some of the advertisers and publishers</p> <p>25 I've worked with in the opening section.</p>	<p style="text-align: right;">Page 168</p> <p>1 conflicts of interests anywhere, correct?</p> <p>2 A. If we're specifically talking about those</p> <p>3 topics, I do not have that information stored in the</p> <p>4 database.</p> <p>5 Q. The only place that information is stored is</p> <p>6 in your mind, correct?</p> <p>7 A. In my reports, I am synthesizing information</p> <p>8 from the case and interpreting that information, but the</p> <p>9 places where I am relying on my experience, the</p> <p>10 information about that experience, is in my reports.</p> <p>11 Q. Let's say I want to -- let's say that you tell</p> <p>12 me about your experiences, and just assume for the sake</p> <p>13 of argument, I'm not implying that this is true, but</p> <p>14 assume I don't believe you. How can I test whether what</p> <p>15 you're saying is true?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: I think you could look for</p> <p>18 information from other industry participants that</p> <p>19 contradicts what I'm saying, and look for information</p> <p>20 that supports it. And based on my synthesis of the</p> <p>21 materials in this case, the additional data supports the</p> <p>22 opinions that I'm drawing.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Does Google have duties to its competitors?</p> <p>25 MR. RENARD: Objection to form.</p>
<p style="text-align: right;">Page 167</p> <p>1 Q. Do you list hundreds?</p> <p>2 A. No.</p> <p>3 Q. And is there a place I can go where I can</p> <p>4 study and understand the interactions you've had with</p> <p>5 all of your advertiser and publisher clients?</p> <p>6 A. The material that's available to study is the</p> <p>7 material that I've cited in my reports.</p> <p>8 THE REPORTER: In your what?</p> <p>9 THE WITNESS: Reports.</p> <p>10 THE REPORTER: Thank you.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. So you don't have, for example, a database of</p> <p>13 the names of all the publishers and advertisers you've</p> <p>14 interacted with and their preferences as to</p> <p>15 transparency, fairness, or conflicts of interest,</p> <p>16 correct?</p> <p>17 A. I don't have a database like that, that I am</p> <p>18 allowed to share.</p> <p>19 Q. You don't have one at all, right?</p> <p>20 A. I have data related to advertisers and</p> <p>21 publishers I've worked with, but most of those specific</p> <p>22 agreements are subject to NDAs for the client</p> <p>23 engagement.</p> <p>24 Q. You don't have a database of all of your</p> <p>25 clients and their views on fairness, transparency, and</p>	<p style="text-align: right;">Page 169</p> <p>1 THE WITNESS: I think it depends on the</p> <p>2 context.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Let's go back to that sentence where you write</p> <p>5 "Conduct benefiting Google's customers at the expense of</p> <p>6 competitors is conflicted when fairness is expected."</p> <p>7 Do you see that?</p> <p>8 A. Yes.</p> <p>9 Q. So you believe that conduct that benefits</p> <p>10 Google's customers at the expense of its competitors is</p> <p>11 conflicted if the market expects fairness, correct?</p> <p>12 A. In this sentence, when I say, "conduct</p> <p>13 benefiting Google's customers at the expense of</p> <p>14 competitors," I mean the competitors to Google's</p> <p>15 customers.</p> <p>16 Q. Do you believe there's any context in which</p> <p>17 Google has duties to its competitors?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: I think that there are places</p> <p>20 where AdX operating as an exchange has duties to behave</p> <p>21 fairly to Google's competitors on, for instance, the ad</p> <p>22 buying tools side.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Do you believe that AdX has any duties to</p> <p>25 exchanges that compete with it?</p>

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<p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: I think there are certain</p> <p>3 business norms that AdX should adhere to when it is</p> <p>4 interacting with other exchanges. But I think that AdX</p> <p>5 should be free to compete with other exchanges. I think</p> <p>6 the problems arise when we tie together multiple</p> <p>7 software platforms, and particularly when we combine</p> <p>8 them with Google's dominant position in the industry.</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. What norms do you believe AdX should adhere to</p> <p>11 when competing against other exchanges?</p> <p>12 A. Fair dealing. For instance, AdX is in a</p> <p>13 position where it could receive bids from other</p> <p>14 exchanges and send back erroneous information to those</p> <p>15 exchanges, and could essentially lie about the</p> <p>16 advertising that was carried out. That is a</p> <p>17 hypothetical example of a norm that I feel like AdX</p> <p>18 should not be violating. And when I say "feel like,"</p> <p>19 what I mean is I think the industry would agree that</p> <p>20 that would not be acceptable.</p> <p>21 Q. Do you believe that Google's AdX has a duty to</p> <p>22 deal in good faith and fairly with other exchanges?</p> <p>23 MR. RENARD: Objection to form.</p> <p>24 THE WITNESS: Independent of Google's other</p> <p>25 AdTech products, I do not think that AdX has a duty to</p>	<p>1 exception.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. If parties enter into a commercial contract</p> <p>4 freely, you agree that it's appropriate to hold the</p> <p>5 parties to that contract, fair?</p> <p>6 MR. RENARD: Objection to the form of the</p> <p>7 question.</p> <p>8 THE WITNESS: Again, I am not a lawyer; I am a</p> <p>9 marketer and data scientist. But based on my</p> <p>10 interpretation of the question you're asking, I think</p> <p>11 that it is appropriate to hold parties to contracts they</p> <p>12 enter into freely.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. You are here speaking today about what the</p> <p>15 online advertising industry generally expects, right?</p> <p>16 MR. RENARD: Objection to form.</p> <p>17 THE WITNESS: That is one of the things that I</p> <p>18 am talking about here today.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. And is it your position that the online</p> <p>21 advertising industry generally expects that when</p> <p>22 commercial parties enter into a written transaction,</p> <p>23 that it's fair to hold them to their bargain?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: Yes. I think there are examples</p>
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<p>1 deal in I think the sense you mean it. But I think that</p> <p>2 when Google's AdX engages in advertising transactions</p> <p>3 and another exchange is that party, then AdX should deal</p> <p>4 honestly with those exchanges in carrying out the</p> <p>5 transaction.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. What's the basis for that belief?</p> <p>8 A. These are the norms in the industry. If we</p> <p>9 have a contract where I will give you a certain amount</p> <p>10 of money and you will show an ad, then there is an</p> <p>11 expectation that if I give you that money, you will show</p> <p>12 that ad. And so if that -- again, a hypothetical</p> <p>13 example, but if we were in that situation and AdX was</p> <p>14 not doing that with another exchange, that would violate</p> <p>15 norms. The conflicts that I'm describing in this</p> <p>16 section relate to the connection between AdX and other</p> <p>17 tools, like DV360 or GAM.</p> <p>18 Q. Is there a norm in the online advertising</p> <p>19 industry that parties should adhere to their contracts?</p> <p>20 A. Yes.</p> <p>21 Q. Do you take any ethical exception to that</p> <p>22 norm?</p> <p>23 MR. RENARD: Objection to form.</p> <p>24 THE WITNESS: If a contract is freely entered</p> <p>25 into by both parties, then I can't think of an ethical</p>	<p>1 in this case where the generally accepted understanding</p> <p>2 of the terms of the contract might be understood</p> <p>3 differently between Google and other parties. And so I</p> <p>4 think conflicts could arise from that. But contracts</p> <p>5 being binding is one of the most central parts of our</p> <p>6 rule of law as far as I understand.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Contracts being binding is a very important</p> <p>9 part of the online advertising industry, isn't it?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: Yes.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Is it your opinion that in the AdTech</p> <p>14 industry, that there are not alternatives to Google's</p> <p>15 products?</p> <p>16 A. It depends on which of Google's products we're</p> <p>17 talking about.</p> <p>18 Q. Which of Google's products would you say there</p> <p>19 is no alternative in the industry for?</p> <p>20 A. If we are saying --</p> <p>21 MR. RENARD: Objection to the form of the</p> <p>22 question.</p> <p>23 THE WITNESS: If we are saying no alternative</p> <p>24 in a strict, absolute sense, then all of Google's</p> <p>25 products have alternatives. If we mean that slightly</p>

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<p style="text-align: right;">Page 174</p> <p>1 more broadly to say, no practical alternative, then I</p> <p>2 think there is not a practical alternative to GAM or to</p> <p>3 Google Ads depending on a company's business goals.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. What about AdX?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: There are alternative exchanges</p> <p>8 that advertisers can buy on for publishers. It is very</p> <p>9 hard to profitably run an online publishing business</p> <p>10 without entering into a business relationship with AdX.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. I'm going to talk about your Opinion 17 next.</p> <p>13 I'm looking at the opening report Paragraph 23,</p> <p>14 Subparagraph 17.</p> <p>15 A. Okay.</p> <p>16 Q. Do you know whether AdX runs a first-price</p> <p>17 auction?</p> <p>18 A. In 2024, it is my understanding that AdX runs</p> <p>19 a first-price auction.</p> <p>20 Q. Do you know when AdX went to a first-price</p> <p>21 auction?</p> <p>22 A. I believe it was in 2019.</p> <p>23 Q. Okay.</p> <p>24 Do you have an understanding of whether</p> <p>25 Reserve Price Optimization was utilized after 2019?</p>	<p style="text-align: right;">Page 176</p> <p>1 Q. Can conduct you would find deceptive ever</p> <p>2 cease being deceptive?</p> <p>3 A. Yes.</p> <p>4 Q. How?</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: A conduct that I find deceptive</p> <p>7 could cease being deceptive by being fully disclosed,</p> <p>8 and after a sufficient period of time, allowing for</p> <p>9 revised analyses to take place in the post-conduct</p> <p>10 world, or if perhaps the party that ceased the conduct</p> <p>11 provided data that allowed affected parties to arrive at</p> <p>12 the moment of the conduct ceasing with new algorithms</p> <p>13 ready to roll.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Where do you get the understanding that</p> <p>16 conduct can be deceptive even after it entirely ceases?</p> <p>17 A. Based on my work analyzing auction data and</p> <p>18 also the materials produced in this case.</p> <p>19 Q. What auction mechanics or optimizations</p> <p>20 mentioned in your report continued after 2019?</p> <p>21 A. My understanding is enhanced dynamic</p> <p>22 allocation has continued after 2019. I am unsure</p> <p>23 whether or not Dynamic Revenue Sharing continued at any</p> <p>24 point past 2019.</p> <p>25 I talk about in my report exchange bidding or</p>
<p style="text-align: right;">Page 175</p> <p>1 A. I believe that Reserve Price Optimization was</p> <p>2 discontinued when AdX moved to a first-price auction.</p> <p>3 Q. Okay.</p> <p>4 Would you agree with me that an auction</p> <p>5 mechanic or optimization cannot deceive anyone at the</p> <p>6 point in which it's been discontinued and is no longer</p> <p>7 utilized?</p> <p>8 MR. RENARD: Objection to form.</p> <p>9 THE WITNESS: No.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Why not?</p> <p>12 A. Speaking from the perspective of a marketing</p> <p>13 data scientist, if I am analyzing data trying to derive</p> <p>14 insights based on auction data, whether this is on the</p> <p>15 publisher side setting price floors or on the advertiser</p> <p>16 side determining optimal bidding strategies, if I am</p> <p>17 operating in an environment where a conduct is applied</p> <p>18 intermittently, whether that's on and off, or turning</p> <p>19 off, there is a challenge in making optimal decision</p> <p>20 logic even after a conduct has ceased. And that is</p> <p>21 because the analyses and algorithms developed during the</p> <p>22 time the conduct was present become instantly out of</p> <p>23 date. If a conduct is ceased and announced, then that</p> <p>24 lessens the extent to which the conduct is deceptive</p> <p>25 after it's been discontinued.</p>	<p style="text-align: right;">Page 177</p> <p>1 open bidding being a conduct that harmed publishers and</p> <p>2 that conduct has continued. And I believe that may be</p> <p>3 all. Other than I guess I would say Privacy Sandbox,</p> <p>4 which to the best of my knowledge has been mothballed.</p> <p>5 But if that returns, it would be a post-2019 conduct.</p> <p>6 Q. Are you still offering an opinion about</p> <p>7 Privacy Sandbox?</p> <p>8 MR. RENARD: Objection to form.</p> <p>9 THE WITNESS: I'm offering opinions about the</p> <p>10 ideas contained in Privacy Sandbox. Again, it is my</p> <p>11 understanding that Google has decided not to release</p> <p>12 Privacy Sandbox. And so the opinions about the</p> <p>13 potential conduct are still in force. But if Privacy</p> <p>14 Sandbox does not get released, then there's no harm from</p> <p>15 Privacy Sandbox.</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. And do your Privacy Sandbox opinions depend on</p> <p>18 the deprecation of third-party cookies?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: My Privacy Sandbox opinions are</p> <p>21 related to the deprecation of third-party cookies. I'm</p> <p>22 not sure what you mean by "depend on the deprecation"</p> <p>23 here.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. If Google were to not deprecate third-party</p>

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<p style="text-align: right;">Page 178</p> <p>1 cookies, would you have the opinion that the Privacy 2 Sandbox is deceptive or unfair? 3 MR. RENARD: Objection to form. 4 THE WITNESS: If third-party cookies remained 5 a viable Internet advertising technology, then my 6 opinions about Privacy Sandbox being unfair and harmful 7 to the industry would be different. 8 BY MR. ROSSON: 9 Q. How so? 10 A. It would -- 11 MR. RENARD: Objection to form. 12 THE WITNESS: It would depend on what 13 Privacy Sandbox looked like under that scenario. 14 BY MR. ROSSON: 15 Q. So sitting here today, if we're to make the 16 assumption that Google does not deprecate third-party 17 cookies, do you have opinions you can share with me 18 about whether Privacy Sandbox is deceptive or unfair? 19 MR. RENARD: Objection to form. 20 THE WITNESS: Under this hypothetical, it is 21 my understanding that we are simultaneously supposing 22 Google does not deprecate third-party cookies and there 23 is some program called Privacy Sandbox. And it is 24 unclear to me what Privacy Sandbox looks like when that 25 first assumption is taken.</p>	<p style="text-align: right;">Page 180</p> <p>1 experience from when Reserve Price Optimization was 2 running. And so if you had never interacted with AdX 3 before 2021, and if my memory is correct that Reserve 4 Price Optimization ceased, then I think under that 5 scenario, I don't believe that you would be deceived by 6 Reserve Price Optimization. 7 BY MR. ROSSON: 8 Q. Do you know the proportion of ad buyers that 9 transacted on AdX between the time Reserve Price 10 Optimization was no longer used in 2023 that had not 11 transacted in AdX before Reserve Price Optimization was 12 no longer used? 13 A. I do not know that proportion. 14 Q. For your Opinion 17, are you relying on the 15 opinions of Dr. Matthew Weinberg? 16 MR. RENARD: Objection to form. 17 THE WITNESS: I am partially relying on the 18 opinions of Dr. Weinberg. 19 BY MR. ROSSON: 20 Q. What do you mean by "partially"? 21 A. I have had access to descriptions of these 22 conducts independently of what I've read in the Weinberg 23 report, and I am also relying on my experience working 24 in the industry during the time when these conducts were 25 extant. And so the Weinberg report is one facet of my</p>
<p style="text-align: right;">Page 179</p> <p>1 BY MR. ROSSON: 2 Q. That's fair. Let me repeat it back. Tell me 3 if I did it wrong. 4 If third-party cookies were not deprecated, 5 it's unclear to you what Privacy Sandbox would look 6 like; is that fair? 7 A. Yes, that's fair. 8 Q. And in that case, you don't have a present 9 opinion sitting here right now about the -- whether 10 Privacy Sandbox is fair or transparent or deceptive 11 under the assumption that third-party cookies are not 12 deprecated; is that right? 13 MR. RENARD: Objection to form. 14 THE WITNESS: Yes, I think that matches what I 15 was attempting to say. 16 BY MR. ROSSON: 17 Q. Okay. Thank you. 18 Imagine I am an ad buyer in 2021, and I go in 19 AdX to transact for an impression. Are you with me? 20 A. Yes. 21 Q. Would you say that I have been deceived by 22 Reserve Price Optimization? 23 MR. RENARD: Objection. Form. 24 THE WITNESS: I think a deception that you 25 suffered in 2021 would only be transmitted via your</p>	<p style="text-align: right;">Page 181</p> <p>1 understanding of these conducts. 2 Q. Are you able to offer all of your opinions 3 without relying on the opinions of Dr. Weinberg? 4 MR. RENARD: Objection to form. 5 THE WITNESS: That would require quite a bit 6 of time for me to assess. 7 BY MR. ROSSON: 8 Q. Is it fair to say that sitting here right now, 9 you cannot tell me what opinions you would be able to 10 offer if you were not permitted to rely on Dr. Weinberg? 11 A. I would be happy to go through the facets of 12 Opinion 17 and attempt to tease apart which ones I could 13 not offer in the absence of the Weinberg report, but I'm 14 not sure right now. 15 Q. Let me do it this way. Are you relying on 16 Dr. Weinberg partially or entirely for your Opinions 1 17 through 16? 18 A. No, I don't believe so. 19 Q. Why did you rely on Dr. Weinberg? 20 A. I relied on Dr. Weinberg's report because I 21 think I lacked the time to fully describe all of these 22 conducts in my report. 23 Q. You relied on Dr. Weinberg because you lacked 24 the time to fully describe all the conducts in your 25 report; is that correct?</p>

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<p style="text-align: right;">Page 182</p> <p>1 A. Yes. I think that the portions of the</p> <p>2 Weinberg report that I rely on are descriptions of the</p> <p>3 conducts, and I estimated that in order to recapitulate</p> <p>4 Dr. Weinberg's analysis or what I understood his</p> <p>5 analysis to be, I would not have the time before the</p> <p>6 report deadline to do so, and I would not be able to</p> <p>7 offer Opinion 17 without descriptions of these conducts.</p> <p>8 And so that's why I rely on the sections of the Weinberg</p> <p>9 report.</p> <p>10 Q. Other than relying on the Weinberg report for</p> <p>11 descriptions of conduct, are you relying on the Weinberg</p> <p>12 report for anything else?</p> <p>13 A. I have reviewed Dr. Weinberg's analyses of the</p> <p>14 conducts, and in places I rely on his analysis as well</p> <p>15 as his description.</p> <p>16 Q. If you had sufficient time, would you consider</p> <p>17 yourself as having the expertise to perform the analysis</p> <p>18 that Mr. Weinberg did as to the part you relied on?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: Generally speaking, yes. In</p> <p>21 terms of the analysis of the dynamics of the conducts</p> <p>22 and the way in which they were implemented, I believe I</p> <p>23 have the expertise to describe and analyze them in the</p> <p>24 sense that I am relying on them in my report.</p> <p>25</p>	<p style="text-align: right;">Page 184</p> <p>1 opinion that applies to all publishers?</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: I do not believe I am offering</p> <p>4 an opinion on all publishers as part of Opinion 17.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. Are you offering an opinion as to all</p> <p>7 advertisers?</p> <p>8 MR. RENARD: Objection as to form.</p> <p>9 THE WITNESS: If by "all advertisers" and "all</p> <p>10 publishers" what you mean is truly all across all tool</p> <p>11 choices by all advertisers and publishers, then the</p> <p>12 answer is, no, I'm not offering an opinion on all</p> <p>13 advertisers.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. And what if I limit it to advertisers or</p> <p>16 publishers who transacted on AdX from 2013 to 2023, are</p> <p>17 you offering an opinion as to all advertisers and</p> <p>18 publishers?</p> <p>19 MR. RENARD: Objection as to form.</p> <p>20 THE WITNESS: There are portions of this</p> <p>21 opinion that I think apply to all advertisers. Some of</p> <p>22 these conducts only affected advertisers who were using</p> <p>23 DV360.</p> <p>24 MR. ROSSON: I'm going to hand you an exhibit</p> <p>25 that I'll mark.</p>
<p style="text-align: right;">Page 183</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Did you consider relying on any experts</p> <p>3 offered by Google?</p> <p>4 A. No.</p> <p>5 Q. Why not?</p> <p>6 A. I was performing an independent analysis of</p> <p>7 these conducts in this section.</p> <p>8 Q. But you did rely on an expert in this section,</p> <p>9 right?</p> <p>10 A. In this section I relied on Dr. Weinberg's</p> <p>11 report. And in my rebuttal report, I rely on Google's</p> <p>12 experts.</p> <p>13 Q. In your opening report, you know that -- well,</p> <p>14 let me pause there.</p> <p>15 In reviewing Dr. Weinberg's opinions that you</p> <p>16 relied on, do you believe they're incorrect in any</p> <p>17 regard?</p> <p>18 MR. RENARD: Objection. Form.</p> <p>19 THE WITNESS: No.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Have you reviewed Dr. Weinberg's deposition?</p> <p>22 A. I don't believe so.</p> <p>23 Q. Are you relying on Dr. Weinberg's deposition?</p> <p>24 A. No.</p> <p>25 Q. For your Opinion 17, are you offering an</p>	<p style="text-align: right;">Page 185</p> <p>1 EXHIBITS:</p> <p>2 (Deposition Exhibit Number 3</p> <p>3 marked for identification.)</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. I'm handing you what I've marked as</p> <p>6 Chandler Exhibit 3.</p> <p>7 Why don't you take a look at that and let me</p> <p>8 know when you've had a chance to review it.</p> <p>9 A. Okay, I've read it.</p> <p>10 Q. All right.</p> <p>11 Have you seen Chandler Exhibit 3 before?</p> <p>12 A. Yes.</p> <p>13 Q. Is it a document you relied on?</p> <p>14 A. I believe so, yes.</p> <p>15 Q. Do you see it's titled "Ad Exchange Auction</p> <p>16 Model" at the top?</p> <p>17 A. Yes.</p> <p>18 Q. I want to go down to that first black bullet</p> <p>19 point there. It says, "DoubleClick Ad Exchange</p> <p>20 determines the winning bidder based on the highest net</p> <p>21 bid submitted."</p> <p>22 Do you see that?</p> <p>23 A. I do.</p> <p>24 Q. Any reason to believe that statement was</p> <p>25 untrue?</p>

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<p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: I believe that statement could</p> <p>3 be misleading to the audience for this, but I think that</p> <p>4 it is vague enough with its use of "based" to be not</p> <p>5 factually inaccurate.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. So you don't have a reason to believe that</p> <p>8 sentence is factually inaccurate, do you?</p> <p>9 A. No. I think that saying the winning bidder is</p> <p>10 determined based on the highest net bid submitted, but</p> <p>11 not the winning bidder is the one submitting the highest</p> <p>12 next bid -- or net bid, I think that is vague enough</p> <p>13 that it's not factually inaccurate.</p> <p>14 Q. The next sentence reads, "Such net bid</p> <p>15 reflects any adjustments Ad Exchange may, at its</p> <p>16 discretion, have made to the bid submitted by the buyer</p> <p>17 for the purpose of optimizing the auction."</p> <p>18 Do you see that?</p> <p>19 A. I do.</p> <p>20 Q. Any reason to believe that statement is not</p> <p>21 factual?</p> <p>22 MR. RENARD: Objection to form.</p> <p>23 THE WITNESS: I have no reason to believe that</p> <p>24 that statement is not factual. I would not consider</p> <p>25 this to be adequate disclosure of some of the conducts</p>	<p>1 not this statement constitutes disclosure partially</p> <p>2 depends on how publishers were made aware of the</p> <p>3 existence of this statement. And I think that this</p> <p>4 statement obfuscates rather than clarifies the conducts</p> <p>5 at issue in this case.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. What I want to know is whether you think it</p> <p>8 would be reasonable for any publisher or advertiser to</p> <p>9 read the first bullet here and to come away with the</p> <p>10 understanding that adjustments to bids will never be</p> <p>11 made?</p> <p>12 MR. RENARD: Objection to the form of the</p> <p>13 question.</p> <p>14 THE WITNESS: If we seclude the take rate as</p> <p>15 an adjustment, then I think it could be reasonable for a</p> <p>16 publisher to read this and think that no other</p> <p>17 adjustments were being made. I think that if we include</p> <p>18 the take rate, so the move from gross to net bid, then I</p> <p>19 think that a publisher would read this and conclude that</p> <p>20 adjustments were being made, and they would expect that</p> <p>21 to be the take rate being harvested.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Okay. But I'm asking about the inverse,</p> <p>24 whether you think it would be reasonable for any</p> <p>25 publisher or advertiser to read Bullet 1 and to conclude</p>
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<p>1 that we're talking about in this case.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. Do you agree that in this sentence Google</p> <p>4 disclosed that Ad Exchange may make adjustments to bids?</p> <p>5 A. I agree that this statement says that Google</p> <p>6 may make adjustment to bids. The disclosure of this</p> <p>7 also depends on how it was promulgated.</p> <p>8 Q. Do you think it would be reasonable for anyone</p> <p>9 to read this disclosure and conclude that Google would</p> <p>10 not make adjustments to bids?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I think that the typical</p> <p>13 publisher reading this would not be able to infer the</p> <p>14 conducts at issue in this case from this statement. And</p> <p>15 I think that many publishers would read this and not</p> <p>16 understand the types of adjustments that were being</p> <p>17 discussed.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. So I'm asking you something different.</p> <p>20 Do you agree with me that in this sentence,</p> <p>21 Google disclosed that it may adjust bids?</p> <p>22 MR. RENARD: Objection to form of the question</p> <p>23 and the preface to the question.</p> <p>24 THE WITNESS: I believe that this statement</p> <p>25 says that Google makes adjustments to bids. Whether or</p>	<p>1 that no adjustment of any kind will ever be made?</p> <p>2 MR. RENARD: Objection to the form of the</p> <p>3 question.</p> <p>4 THE WITNESS: Again, I think that there would</p> <p>5 be publishers who would read this and conclude that the</p> <p>6 only adjustment that was being made was the imposition</p> <p>7 of a take rate.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. My question is whether you think it would be</p> <p>10 reasonable for any publisher to conclude that no</p> <p>11 adjustment of any kind, take rate or otherwise, would</p> <p>12 ever be made, and that the way they knew that was</p> <p>13 reading this first bullet point.</p> <p>14 MR. RENARD: Objection to form and the</p> <p>15 assumption.</p> <p>16 THE WITNESS: Again, I think it would be</p> <p>17 reasonable for a publisher to read this and conclude</p> <p>18 that the adjustment that Google is talking about is the</p> <p>19 imposition of a take rate, and to conclude that no other</p> <p>20 adjustments were being made. But if we include the take</p> <p>21 rate, then I think all publishers would read this and</p> <p>22 expect an adjustment to be made.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Now, the sentence reads, "Such net bid</p> <p>25 reflects any adjustments Ad Exchange may, at its</p>

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<p>1 discretion, have made to the bid submitted by the buyer</p> <p>2 for the purpose of optimizing the auction," right?</p> <p>3 A. Yes.</p> <p>4 Q. And is it your opinion that publishers would</p> <p>5 read this and say, Well, I think what's being changed is</p> <p>6 the take rate?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: Yes, I think that publishers</p> <p>9 could read this and think the net bid reflects the take</p> <p>10 rate being imposed on the bid submitted by the buyer.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Do you agree that Google disclosed that it may</p> <p>13 adjust bids at its discretion?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: I would agree that this sentence</p> <p>16 says that Google may adjust bids at its discretion, and</p> <p>17 whether or not that constitutes disclosure depends not</p> <p>18 only on what's in the sentence, but then also how that</p> <p>19 information is shared.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. What is your definition of "disclosure" as you</p> <p>22 just used the term?</p> <p>23 MR. RENARD: Objection to form.</p> <p>24 THE WITNESS: I was attempting to use</p> <p>25 disclosure in the same sense that you were using it in</p>	<p>1 visited its website?</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: For conducts like the</p> <p>4 manipulations we're discussing in this case, I think</p> <p>5 Google went out of its way to not call attention to the</p> <p>6 information that it was providing.</p> <p>7 Reading the internal e-mail correspondence of</p> <p>8 Google employees, reading the marginal comments on edits</p> <p>9 of the Help Desk pages, I saw a commentary by Google</p> <p>10 employees trying to thread a needle where they gave</p> <p>11 enough information to cover their conducts without</p> <p>12 calling undue attention to them. And this includes</p> <p>13 things like removing references to second-price</p> <p>14 auctions, but not broadcasting that information or</p> <p>15 attempting to ensure that their customers knew and</p> <p>16 understood what they were saying, but merely put the</p> <p>17 information somewhere on the Internet so that they felt</p> <p>18 like they had created a statement they could point to</p> <p>19 later.</p> <p>20 MR. ROSSON: I object as nonresponsive.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. What duties did Google have, in your view, to</p> <p>23 call attention to its own website?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: If Google was attempting to</p>
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<p>1 your question. And I am taking "disclosure" to mean</p> <p>2 giving the information to the publisher in a way that</p> <p>3 the publisher could incorporate into their business</p> <p>4 practices.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. For these next questions, I'm going to use</p> <p>7 "disclosure" as it's defined in the Merriam-Webster</p> <p>8 Dictionary, okay? "To make known or public, to expose</p> <p>9 to view."</p> <p>10 Do you understand?</p> <p>11 A. Yes.</p> <p>12 Q. Okay.</p> <p>13 Do you agree with me that Google made known</p> <p>14 that it may adjust bids at its discretion?</p> <p>15 MR. RENARD: Objection to the form of the</p> <p>16 question and the preface to it.</p> <p>17 THE WITNESS: It's my understanding that this</p> <p>18 document was created for a part of Google's website, and</p> <p>19 so whether or not Google's adjustments that it was</p> <p>20 making it its discretion was known depends on the extent</p> <p>21 to which Google was calling attention to that site and</p> <p>22 publishers were visiting it.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. What duties in your mind did Google have to</p> <p>25 call attention to its website and make sure that people</p>	<p>1 disclose auction manipulations, Google had a duty to</p> <p>2 ensure that the affected parties were aware of the</p> <p>3 changes. And the mechanisms by which Google might call</p> <p>4 attention to those changes could be varied.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. So other than posting information on its own</p> <p>7 website, what else in your view should Google have done</p> <p>8 to inform the marketing community of Chandler Exhibit 3?</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: I'm not offering opinions in</p> <p>11 this case on what Google should have done necessarily.</p> <p>12 Google has a wide variety of tools at its disposal to</p> <p>13 promulgate information, and merely changing website</p> <p>14 documentation is insufficient.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Publishers and advertisers are in the business</p> <p>17 of putting information on the Internet, right?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: That is one of the things they</p> <p>20 do, yes.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. Would you agree that, generally speaking,</p> <p>23 publishers and advertisers are Internet savvy?</p> <p>24 A. Yes, I would agree that, generally speaking,</p> <p>25 entities that advertise on the Internet are Internet</p>

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<p style="text-align: right;">Page 194</p> <p>1 savvy. And entities that make their money by placing</p> <p>2 ads on the Internet are certainly Internet savvy.</p> <p>3 Q. Would you agree with me that online publishers</p> <p>4 and advertisers generally understand how to find</p> <p>5 information on the Internet?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: I think it really depends on</p> <p>8 that information. I think the change to a website is</p> <p>9 not something that the industry would reasonably</p> <p>10 consider disclosure. Google has at its -- I'm</p> <p>11 forgetting the word. I'm sorry.</p> <p>12 Google has the option to issue press releases,</p> <p>13 to send messages, to create pop-ups that appear when</p> <p>14 someone logs into a tool, and those are ways to call</p> <p>15 attention to changes. A change to a website is not</p> <p>16 something that even Internet-savvy people are likely to</p> <p>17 notice unless they have somehow set up an alert every</p> <p>18 time a website changes to be notified of it.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. If Google issues a press release, where do you</p> <p>21 imagine them putting it on the Internet?</p> <p>22 A. I imagine them sending it to journalists that</p> <p>23 cover technology as they typically do. I imagine them</p> <p>24 putting it on the news portion of the product page, and</p> <p>25 also making changes like this.</p>	<p style="text-align: right;">Page 196</p> <p>1 of the adjustments, the buyer will not be charged more</p> <p>2 than the buyer's bid.</p> <p>3 Q. Any reason to believe that sentence was</p> <p>4 factually untrue?</p> <p>5 MR. RENARD: Objection to form.</p> <p>6 THE WITNESS: I have no reason to believe that</p> <p>7 statement was factually untrue for an individual bid.</p> <p>8 There were conducts like RPO where a future bid by that</p> <p>9 buyer would result in the buyer paying more than they</p> <p>10 would have otherwise without the conduct, but on an</p> <p>11 individual auction, that statement, I believe, is</p> <p>12 accurate.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. Are you aware of an instance where a bidder</p> <p>15 bid X, but paid more than X?</p> <p>16 A. Not on an individual auction, no, I'm not</p> <p>17 aware of that.</p> <p>18 Q. Are you aware of either in the aggregate or</p> <p>19 individually a bidder bidding X and paying more than X?</p> <p>20 MR. RENARD: Objection to form.</p> <p>21 THE WITNESS: I am aware of a conduct like RPO</p> <p>22 raising aggregate prices for a bidder over time.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Such that a bidder would end up paying a</p> <p>25 greater amount than the bidder bid?</p>
<p style="text-align: right;">Page 195</p> <p>1 MR. RENARD: Mr. Rosson, whenever you get to a</p> <p>2 convenient breaking point, it's been about an hour.</p> <p>3 MR. ROSSON: Yeah, we can break now.</p> <p>4 MR. RENARD: Thanks.</p> <p>5 THE VIDEOGRAPHER: This concludes the end of</p> <p>6 Media 5. We are going off the record at 3:37 p.m.</p> <p>7 (RECESS TAKEN)</p> <p>8 THE VIDEOGRAPHER: This is the start of</p> <p>9 Media 6. We are back on the record at 4:00 p.m.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Dr. Chandler, any testimony from today that</p> <p>12 you would like to change or correct?</p> <p>13 A. No.</p> <p>14 Q. We're looking at Chandler Exhibit 3. Do you</p> <p>15 still have that in front of you?</p> <p>16 A. I do.</p> <p>17 Q. In the first bullet point, do you see the</p> <p>18 sentence that reads, "Regardless of whether any such</p> <p>19 adjustments are made, the winning buyer will never be</p> <p>20 charged more than the bid it submits"?</p> <p>21 A. Yes, I see that.</p> <p>22 Q. And that sentence is indicating that the</p> <p>23 winning bidder will never be charged more than the bid</p> <p>24 it submits, right?</p> <p>25 A. Yes. That sentence is saying that regardless</p>	<p style="text-align: right;">Page 197</p> <p>1 A. Such that the bidder ends up paying a greater</p> <p>2 amount than the bidder would have otherwise.</p> <p>3 Q. What I'm asking about is whether you're aware</p> <p>4 of a circumstance where a bidder paid an amount of money</p> <p>5 greater than its bid.</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: I am not aware of a circumstance</p> <p>8 where the bidder is paying more than the bidder's bid;</p> <p>9 I'm aware of circumstances where the bidder paid more</p> <p>10 than the bidder would have expected to pay without the</p> <p>11 conducts.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. Go down to the last bullet point, if you</p> <p>14 would.</p> <p>15 A. [Witness complies.]</p> <p>16 Q. It reads, "The Google DoubleClick Ad Exchange</p> <p>17 may run limited experiments designed to optimize the</p> <p>18 auction."</p> <p>19 Do you see that?</p> <p>20 A. I do.</p> <p>21 Q. And that sentence is indicating that Google</p> <p>22 may run experiments, right?</p> <p>23 A. That --</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: That sentence is indicating that</p>

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<p>1 Google may run limited experiments.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. Is there any reading of that bullet that you</p> <p>4 can imagine where someone could reasonably conclude that</p> <p>5 Google would not run any experiments?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: I think that if someone read</p> <p>8 this sentence, then they would conclude that there was a</p> <p>9 chance that Google would be running experiments on</p> <p>10 auctions that they were participating in.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. And the Chandler Exhibit 3, last bullet point,</p> <p>13 also indicates what the experiments may include, right?</p> <p>14 A. Yes.</p> <p>15 Q. Did every ad buyer and seller who transacted</p> <p>16 on AdX from 2013 to 2023 read Chandler Exhibit 3?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: I do not know how this</p> <p>19 information was shared with advertisers and publishers.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. So you don't know whether every ad buyer and</p> <p>22 seller who transacted on AdX from 2013 to 2023 read the</p> <p>23 information contained in Chandler Exhibit 3; is that</p> <p>24 right?</p> <p>25 MR. RENARD: Same objection.</p>	<p>1 BY MR. ROSSON:</p> <p>2 Q. For the information contained in Chandler</p> <p>3 Exhibit 3, you would be surprised if any ad buyer or</p> <p>4 seller relied on the information or found it material,</p> <p>5 correct?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: I do not think Chandler</p> <p>8 Exhibit 3 has information in it that advertisers or</p> <p>9 publishers could use to appropriately handle the</p> <p>10 conducts at issue in this case.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. I'm asking a broader question.</p> <p>13 A. Can you repeat the question, please?</p> <p>14 Q. Is it your opinion that you would not expect</p> <p>15 any advertiser or publisher to rely on or find material</p> <p>16 the information in Chandler Exhibit 3?</p> <p>17 MR. RENARD: Objection to the form.</p> <p>18 THE WITNESS: What do you mean by "rely on" or</p> <p>19 "find material"?</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. How did you use those terms from our prior</p> <p>22 discussion a minute ago?</p> <p>23 MR. RENARD: Object to that question. Form.</p> <p>24 THE WITNESS: I would use "rely on" or "find</p> <p>25 material" to mean in this case that the information</p>
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<p>1 THE WITNESS: That's correct. I don't know</p> <p>2 how this information was shared. And so I don't know if</p> <p>3 every advertiser or every publisher read this</p> <p>4 information.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. How many advertisers or publishers relied on</p> <p>7 the information contained in Chandler Exhibit 3?</p> <p>8 MR. RENARD: Objection. Form.</p> <p>9 THE WITNESS: I don't know how many relied</p> <p>10 upon it. And now having reviewed the conducts at issue,</p> <p>11 I don't think that Chandler Exhibit 3 could be relied</p> <p>12 upon to appropriately account for the conducts that</p> <p>13 we're discussing in this case.</p> <p>14 MR. ROSSON: Okay. Object as nonresponsive to</p> <p>15 everything after "it."</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. How many ad buyers or sellers from 2013 to</p> <p>18 2023 found the information contained in Chandler</p> <p>19 Exhibit 3 to be material to them?</p> <p>20 MR. RENARD: Objection. Form.</p> <p>21 THE WITNESS: Based on my industry experience</p> <p>22 and my time working with advertisers and publishers, I</p> <p>23 would be surprised if any advertisers or publishers</p> <p>24 found this material based on what I now know to be true</p> <p>25 about the conducts underlying this text.</p>	<p>1 contained in Chandler Exhibit 3 would give advertisers</p> <p>2 and publishers the information necessary to</p> <p>3 appropriately adjust their advertising strategies based</p> <p>4 on the conducts we're discussing in this case. And</p> <p>5 under that definition, I do not think it would be</p> <p>6 possible for advertisers or publishers if they read this</p> <p>7 to appropriately take action.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. You said you have a definition of "rely on"</p> <p>10 and "material" for this case. Am I right about that?</p> <p>11 A. I'm not sure.</p> <p>12 MR. RENARD: Objection. Form.</p> <p>13 THE REPORTER: I'm sorry, what was that?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: I'm not sure I'm following that</p> <p>16 question.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. How many -- let me ask it more broadly.</p> <p>19 When I ask you any question about how many</p> <p>20 advertisers or publishers did anything from 2013 to</p> <p>21 2023, you're not going to be able to provide an answer</p> <p>22 because you didn't review advertiser-by-advertiser or</p> <p>23 publisher-by-publisher conduct; is that correct?</p> <p>24 MR. RENARD: Objection. Form.</p> <p>25 THE WITNESS: No.</p>

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<p style="text-align: right;">Page 202</p> <p>1 BY MR. ROSSON: 2 Q. Okay. 3 Tell me about your review of 4 advertiser-by-advertiser or publisher-by-publisher 5 conduct. 6 MR. RENARD: Objection to the form of the 7 question. 8 THE WITNESS: I did not carry out an 9 advertiser-by-advertiser review or 10 publisher-by-publisher review, other than reviewing 11 materials in this case. But you asked -- when you asked 12 questions about how many, and that question is 13 answerable regardless of whether or not an 14 advertiser-by-advertiser review or 15 publisher-by-publisher review was carried out. 16 BY MR. ROSSON: 17 Q. If you wanted to better understand whether a 18 specific advertiser or publisher found Chandler 19 Exhibit 3 to contain important information, information 20 that mattered to it, how would you do that? 21 MR. RENARD: Objection to form. 22 THE WITNESS: One way to do that would be to 23 read Chandler Exhibit 3, and compare it to my 24 understanding of the industry created over the last 25 25 years, and use that experience to determine how</p>	<p style="text-align: right;">Page 204</p> <p>1 care what disclosures Google made about its online 2 auction? 3 MR. RENARD: Objection to form. 4 THE WITNESS: Advertisers have agency, and if 5 there was a disclosure that was accurate, full, and 6 timely, then that advertiser would have a choice about 7 the extent to which the advertiser wanted to incorporate 8 that disclosure in its strategies going forward. 9 In the absence of that full timely and 10 accurate disclosure, the advertiser does not have a 11 choice. 12 BY MR. ROSSON: 13 Q. An advertiser could make the choice simply 14 never to consider online auction rules and instead look 15 at their return on investment only, right? 16 MR. RENARD: Objection. Form. 17 THE WITNESS: It would depend on the 18 advertiser's situation. 19 BY MR. ROSSON: 20 Q. Right. So sometimes it could be true that an 21 advertiser cares only about ROI and cares nothing about 22 auction rules, right? 23 MR. RENARD: Same objection. 24 THE WITNESS: I have not worked with an 25 advertiser like that, nor have I reviewed testimony from</p>
<p style="text-align: right;">Page 203</p> <p>1 advertisers or publishers would interpret this 2 information, and compare that interpretation to the full 3 interpretation I have of these conducts based on 4 reviewing the ma -- classified material from this case, 5 and then estimating the extent to which an advertiser or 6 publisher could infer these conducts based on this 7 statement. 8 BY MR. ROSSON: 9 Q. Did you do that? 10 A. Yes. 11 Q. Now, I want to know: If whatever advertiser 12 won the 30,000th impression on September 20th, 2019, 13 relied on Chandler Exhibit 3, and said, This information 14 is important to me; I read it and it's important, will 15 your opinions in this case allow me to do that? 16 MR. RENARD: Objection to form. 17 THE WITNESS: My opinions in this case do not 18 give you information on specific auction impressions on 19 a specific day, but they do give you information on 20 generally what advertisers and publishers would 21 understand about these conducts based on the information 22 that was provided and the information that was not 23 provided. 24 BY MR. ROSSON: 25 Q. Is it true that an advertiser could simply not</p>	<p style="text-align: right;">Page 205</p> <p>1 an advertiser that fits that description, but it could 2 be true. 3 BY MR. ROSSON: 4 Q. You didn't do any analysis that would allow 5 you to conclude that there are no advertisers who are 6 driven solely by ROI and not by auction rule 7 disclosures, correct? 8 MR. RENARD: Objection. Form. 9 THE WITNESS: I analyzed the materials in this 10 case and applied my industry experience, and did not 11 discover these advertisers that you're describing here. 12 But it is impossible to say with certainty that such an 13 advertiser doesn't exist; it just does not match any of 14 the available evidence or my experience. 15 BY MR. ROSSON: 16 Q. Did you review the depositions of the states? 17 A. Yes. 18 Q. Did all of the states know that there's such a 19 thing as an online auction? 20 MR. RENARD: Objection to the form. 21 THE WITNESS: No. 22 BY MR. ROSSON: 23 Q. And those states were advertisers, right? 24 MR. RENARD: Objection to form. 25 THE WITNESS: The witnesses representing the</p>

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<p style="text-align: right;">Page 206</p> <p>1 states were representing the states as advertisers.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. You agree with me that some advertisers don't</p> <p>4 even know that -- excuse me.</p> <p>5 You agree with me that some advertisers who</p> <p>6 place online advertisements don't know that online</p> <p>7 auctions exist at all, right?</p> <p>8 MR. RENARD: Objection. Form.</p> <p>9 THE WITNESS: Yes. There are participants in</p> <p>10 the open web display auction ecosystem who either</p> <p>11 because of lack of experience, lack of education, or</p> <p>12 lack of need perhaps are unaware of the way in which</p> <p>13 online auctions work.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Or of their existence, right?</p> <p>16 MR. RENARD: Objection. Form.</p> <p>17 THE WITNESS: I'm not sure.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. If I'm an online advertiser who doesn't know</p> <p>20 that online auctions exist, do you expect it would be</p> <p>21 important to my decision-making to know what the rules</p> <p>22 of an online auction are?</p> <p>23 MR. RENARD: Objection. Form.</p> <p>24 THE WITNESS: Under the initial part of that</p> <p>25 question, if you do not know that online auctions exist,</p>	<p style="text-align: right;">Page 208</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. If I'm an online advertiser who doesn't know</p> <p>3 that an online auction exists -- well, I'll move on.</p> <p>4 Now, forgive me if I asked you something</p> <p>5 similar this morning. Now that you have Chandler</p> <p>6 Exhibit 3 in front of you, do you recall reviewing this</p> <p>7 information in your practice at Data Insights prior to</p> <p>8 your engagement for this case?</p> <p>9 A. I do not recall reviewing this information</p> <p>10 prior to my engagement in this case.</p> <p>11 Q. But you were in a position where clients would</p> <p>12 be asking you how AdX's auction rules worked; is that</p> <p>13 right?</p> <p>14 A. I was in a position to advise clients on</p> <p>15 participation in AdX online auctions. The underlying</p> <p>16 mechanics of those auctions were generally not well</p> <p>17 understood in the industry compared to my understanding</p> <p>18 now having looked at the classified materials. So the</p> <p>19 industry, my clients, and myself were under a</p> <p>20 misapprehension about how AdX operated.</p> <p>21 Q. Would it be typical for clients to ask you</p> <p>22 questions -- online advertising clients or publishers --</p> <p>23 does Google run experiments?</p> <p>24 MR. RENARD: Objection to the form.</p> <p>25 THE WITNESS: I don't recall a client asking</p>
<p style="text-align: right;">Page 207</p> <p>1 then knowing the auction rules I think would be</p> <p>2 impossible.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. And therefore, not important to my decision-</p> <p>5 making, right?</p> <p>6 MR. RENARD: Same objection.</p> <p>7 THE WITNESS: Yes. Under this hypothetical,</p> <p>8 if you don't know that online auctions exist, then</p> <p>9 auction rules are not taken into account in your</p> <p>10 decision-making. That does not mean that they are not</p> <p>11 important to your decision-making, because they affect</p> <p>12 things like your ROI.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. If I'm an online advertiser who doesn't know</p> <p>15 that online auctions exist at all, do you agree that</p> <p>16 changes to online auction rules are not an important</p> <p>17 data point for me?</p> <p>18 MR. RENARD: Objection. Form.</p> <p>19 THE WITNESS: The vast majority of AdX spend</p> <p>20 does not fit this description, but if there is an</p> <p>21 advertiser who is spending on AdX, and they don't know</p> <p>22 that online auctions exist at all, then the online</p> <p>23 auction rules are an important data point to you only</p> <p>24 insofar as they affect data points that you do care</p> <p>25 about, such as ROI.</p>	<p style="text-align: right;">Page 209</p> <p>1 me that question.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. Do you recall a client ever asking you: Does</p> <p>4 Google run optimizations?</p> <p>5 A. I do not recall that. I recall clients asking</p> <p>6 me questions like, Is AdX a second-price auction, during</p> <p>7 the period of time where I believed it to be a</p> <p>8 second-price auction when it was not a second-price</p> <p>9 auction because of these conducts? But I don't recall a</p> <p>10 client asking me: Does Google run optimizations?</p> <p>11 Q. When clients asked you, Does Google run a</p> <p>12 second-price auction, would it be your practice to</p> <p>13 search out information on Google's blog or Help page?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: I would typically gather that</p> <p>16 information from several sources, Internet, research.</p> <p>17 So that could include Google's blog or Help page,</p> <p>18 analyzing the auction data itself, reading trade press</p> <p>19 about the auction, and those sorts of ways.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. But you don't remember being asked the</p> <p>22 question, Does Google run a second-price auction, and</p> <p>23 going to take a look at Chandler Exhibit 3, correct?</p> <p>24 A. That's right. I don't remember being asked</p> <p>25 the question about Google running a second-price auction</p>

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<p style="text-align: right;">Page 210</p> <p>1 and reading Chandler Exhibit 3, but I will say that even</p> <p>2 reading Chandler Exhibit 3 in the absence of the other</p> <p>3 materials that I've had access to would not be enough</p> <p>4 information for me to determine with any sort of</p> <p>5 precision what type of auction Google is running and</p> <p>6 whether it was a truthful second-price auction, an</p> <p>7 untruthful second-price auction, or a third-price</p> <p>8 auction.</p> <p>9 MR. ROSSON: Okay. Object as nonresponsive</p> <p>10 beginning even if.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. I want to clarify a term with you.</p> <p>13 When you say "truthful" versus "non-truthful</p> <p>14 auction," what distinction are you making?</p> <p>15 A. I'm using the language that Google used</p> <p>16 internally about its auctions.</p> <p>17 Q. And what's your understanding of that?</p> <p>18 A. Can you clarify that question for me?</p> <p>19 Q. Sure.</p> <p>20 What is your understanding of the difference</p> <p>21 between a truthful auction and a non-truthful auction?</p> <p>22 A. In the context of a second-price auction, my</p> <p>23 understanding of a truthful second-price auction is an</p> <p>24 auction where the participant on the buy side submitting</p> <p>25 the highest bid pays a price one cent over the second</p>	<p style="text-align: right;">Page 212</p> <p>1 I think I did see this back in 2016 or 2017.</p> <p>2 Q. The title -- well, first of all, this is a</p> <p>3 Google blog post, right?</p> <p>4 MR. RENARD: Objection to form.</p> <p>5 THE WITNESS: Yes, I believe it's part of the</p> <p>6 Ad Manager blog.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Do you know what a blog is?</p> <p>9 A. Pardon?</p> <p>10 Q. Do you know what a blog is?</p> <p>11 A. Yes. It is a word that is short for weblog.</p> <p>12 Q. Okay. And do you see there's an HTTPS</p> <p>13 indicator in the bottom left of the first page?</p> <p>14 A. Yes.</p> <p>15 Q. Do you see that part of that hyperlink reads,</p> <p>16 "blog.google"?</p> <p>17 A. I do see that.</p> <p>18 Q. Okay.</p> <p>19 The title here is, "Smarter optimizations to</p> <p>20 support a healthier programmatic market."</p> <p>21 Do you see that?</p> <p>22 A. Yes.</p> <p>23 Q. And if we go to the second page, second line</p> <p>24 from the top, it reads, "For many years Google has used</p> <p>25 optimization and machine learning techniques to improve</p>
<p style="text-align: right;">Page 211</p> <p>1 highest bid in the auction.</p> <p>2 An untruthful second-price auction could have</p> <p>3 a variety of meanings.</p> <p>4 Q. I don't want to ask you all the different</p> <p>5 potential meanings. Do you mean that a non-truthful</p> <p>6 second-price auction would be a second-price auction</p> <p>7 that doesn't meet the criteria that you described for a</p> <p>8 truthful second-price auction?</p> <p>9 A. Yes, while being represented as a second-price</p> <p>10 auction.</p> <p>11 EXHIBITS:</p> <p>12 (Deposition Exhibit Number 4</p> <p>13 marked for identification.)</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. I'm going to hand you Chandler Exhibit 4.</p> <p>16 Have you seen this document before?</p> <p>17 A. I have a vague recollection of having seen</p> <p>18 this document before, but I can't recall with precision.</p> <p>19 Q. Let me start by asking you in your private</p> <p>20 practice, independent of this litigation and you serving</p> <p>21 as an expert. Do you remember reading the Google blog</p> <p>22 post that's Chandler Exhibit 4?</p> <p>23 A. Let me take a moment to --</p> <p>24 Q. Sure, go ahead.</p> <p>25 A. -- skim it.</p>	<p style="text-align: right;">Page 213</p> <p>1 the performance of our ad products."</p> <p>2 Do you see that?</p> <p>3 A. I do.</p> <p>4 Q. And so ad buyers and sellers could tell that</p> <p>5 Google was using optimizations and machine learning from</p> <p>6 this blog post, right?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I would say that language is so</p> <p>9 vague as to be almost meaningless.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Do you agree it would be unreasonable for an</p> <p>12 ad buyer or seller to conclude from the top of Page 2,</p> <p>13 first full sentence, that Google was not using</p> <p>14 optimizations or machine learning?</p> <p>15 MR. RENARD: Objection to form.</p> <p>16 THE WITNESS: I think an ad seller, as I</p> <p>17 believe was the target audience for this blog post,</p> <p>18 would not know what to conclude from this, but they</p> <p>19 would read that Google has used optimizations and</p> <p>20 machine learning techniques, which I think could mean</p> <p>21 almost anything.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Whatever optimization and machine learning</p> <p>24 techniques mean to a reader, Chandler Exhibit 4 tells</p> <p>25 the reader that Google has been using them, right?</p>

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<p>1 MR. RENARD: Same objection.</p> <p>2 THE WITNESS: Yes, that's what that line says.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Okay.</p> <p>5 I'm going about halfway down, Page 2, there's</p> <p>6 a sentence that says, "On average 5% of Private Auction</p> <p>7 impressions on our platform have an Open Auction buyer</p> <p>8 willing to pay more than the Private Auction deal</p> <p>9 price."</p> <p>10 Do you see that?</p> <p>11 A. I do see that.</p> <p>12 Q. Any reason to believe that statement is</p> <p>13 factually untrue?</p> <p>14 MR. RENARD: Objection. Form.</p> <p>15 THE WITNESS: No, I have no reason to doubt</p> <p>16 the veracity of that statement.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Top of Page 3 reads, "In addition to helping</p> <p>19 publishers maximize revenue from Private Auctions, we've</p> <p>20 been experimenting with optimized pricing to help</p> <p>21 publishers set price floors in the Open Auction that</p> <p>22 more closely reflect the value of their inventory."</p> <p>23 Do you see that?</p> <p>24 A. I do see that.</p> <p>25 Q. Do you agree that it would be unreasonable for</p>	<p>1 A. Only in that the numerical information in that</p> <p>2 is somewhat vague, "more than 50%." In many cases it's</p> <p>3 hard to know with precision what they mean by this. But</p> <p>4 I would expect that it would be accurate.</p> <p>5 Q. The next sentence reads, "Publishers see this</p> <p>6 gap as a revenue opportunity and try to close the gap by</p> <p>7 applying manually-calculated price floors."</p> <p>8 Do you see that?</p> <p>9 A. I do see that.</p> <p>10 Q. Any reason to believe that statement was</p> <p>11 untrue?</p> <p>12 MR. RENARD: Objection to form.</p> <p>13 THE WITNESS: I am not sure to what extent</p> <p>14 publishers were able to analyze the information that you</p> <p>15 would need in order to come to this conclusion. So I</p> <p>16 don't know if what Google is saying here is that when</p> <p>17 told the previous sentences, publishers thought that</p> <p>18 that was a price gap and wanted to close the gap, or if</p> <p>19 it means that publishers were doing that analysis. And</p> <p>20 I think that often publishers did not have the data to</p> <p>21 do that analysis.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. You know from experience that some publishers</p> <p>24 spent thousands of hours manually calculating price</p> <p>25 floors, correct?</p>
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<p>1 an ad buyer or seller to read that sentence and conclude</p> <p>2 that Google does not run experiments?</p> <p>3 MR. RENARD: Objection. Form.</p> <p>4 THE WITNESS: I think a publisher reading this</p> <p>5 would conclude that in the past Google had run</p> <p>6 experiments. They would not know the nature of those</p> <p>7 experiments.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. First full paragraph on Page 3 reads, "The</p> <p>10 Open Auction tends to have a large price gap between</p> <p>11 what a buyer bids and what they pay."</p> <p>12 Do you see that?</p> <p>13 A. I do see that.</p> <p>14 Q. Any reason to believe that statement was</p> <p>15 untrue as of the date of this blog post?</p> <p>16 A. I have no reason to think that that statement</p> <p>17 is untrue.</p> <p>18 Q. Okay.</p> <p>19 The next sentence says, "We've observed a more</p> <p>20 than 50% price gap between bid and closing prices in</p> <p>21 many cases."</p> <p>22 Do you see that sentence?</p> <p>23 A. I do see that.</p> <p>24 Q. Any reason to believe that statement was</p> <p>25 untrue as of the date of the blog post?</p>	<p>1 A. Yes.</p> <p>2 Q. And they did that in order to determine the</p> <p>3 economically efficient price floor, right?</p> <p>4 A. Yes, I would probably say that, as they did</p> <p>5 that in an effort to maximize revenue.</p> <p>6 Q. Manually calculating price floors is a data</p> <p>7 intensive process; is that right?</p> <p>8 A. Typically, yes.</p> <p>9 Q. You have, for example, modeled price floors</p> <p>10 using millions of data points, right?</p> <p>11 A. Yes.</p> <p>12 Q. Second full paragraph on Page 3 -- well,</p> <p>13 that's kind of subjective.</p> <p>14 Go down to the third paragraph of Page 3, if</p> <p>15 you would. It reads, "Optimized pricing in the</p> <p>16 Open Auction uses historical data to automate the</p> <p>17 post-auction analysis and updating of floor prices that</p> <p>18 publishers already do and take it a step further."</p> <p>19 Do you see that?</p> <p>20 A. I'm sorry, where are we reading?</p> <p>21 Q. I'm on Page 3, and I'm looking at the third</p> <p>22 paragraph. It begins, "Optimized pricing".</p> <p>23 A. Okay. The second complete paragraph?</p> <p>24 Q. Yes.</p> <p>25 A. Yes, I see that.</p>

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<p style="text-align: right;">Page 218</p> <p>1 Q. All right.</p> <p>2 You would agree with me that it was disclosed</p> <p>3 to ad buyers and sellers that, "Optimized pricing in the</p> <p>4 Open Auction uses historical data to automate the</p> <p>5 post-auction analysis and updating of floor prices,"</p> <p>6 right?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I would not agree that a blog</p> <p>9 post on the Ad Manager page constitutes disclosure to</p> <p>10 advertisers.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Let me use a different word.</p> <p>13 All of the information in Chandler Exhibit 4</p> <p>14 was made public, right?</p> <p>15 A. Yes, I believe that as of May 2016, this</p> <p>16 information was public.</p> <p>17 Q. The last full paragraph on Page 3 reads, "In</p> <p>18 our experiments to date, we've applied optimized pricing</p> <p>19 to about 15% of transactions, creating over 5% lift in</p> <p>20 revenue for publishers using the Open Auction."</p> <p>21 Do you see that?</p> <p>22 A. I do see that.</p> <p>23 Q. Is this an example of Google publicly</p> <p>24 disclosing an experiment?</p> <p>25 MR. RENARD: Objection to form.</p>	<p style="text-align: right;">Page 220</p> <p>1 the specific numbers quoted in this sentence.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. You don't know how many ad buyers or ad</p> <p>4 sellers who transacted on AdX from 2016 to 2023 read</p> <p>5 this blog post, right?</p> <p>6 A. No. I don't know how many ad sellers read it.</p> <p>7 It was not disclosed in a place where ad buyers were</p> <p>8 likely to read it. And so, I would suspect that however</p> <p>9 many sellers read it, the number of buyers would be much</p> <p>10 fewer.</p> <p>11 Q. You don't know if a thousand companies or a</p> <p>12 million companies read this blog post, right?</p> <p>13 MR. RENARD: Objection to form.</p> <p>14 THE WITNESS: To the best of my knowledge,</p> <p>15 there are not a million users of Google Ad Manager. And</p> <p>16 so I think I can say to a reasonable degree of</p> <p>17 scientific certainty that it was not a million companies</p> <p>18 who read this blog post.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. You don't know if it was 1,000 or 10,000</p> <p>21 companies, right?</p> <p>22 A. That's correct.</p> <p>23 Q. 1,000 or 100,000, right?</p> <p>24 MR. RENARD: Objection to the form.</p> <p>25 THE WITNESS: Again, I think it is quite</p>
<p style="text-align: right;">Page 219</p> <p>1 THE WITNESS: I would say that this is an</p> <p>2 example of Google disclosing some details of an</p> <p>3 experiment to some publishers.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Is this an example of Google publicly</p> <p>6 discussing an experiment?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I would say this is an example</p> <p>9 of Google publicly admitting that they were running an</p> <p>10 experiment.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. And any reader of Chandler Exhibit 4 could</p> <p>13 read and understand that Google had run an experiment,</p> <p>14 right?</p> <p>15 MR. RENARD: Objection to form.</p> <p>16 THE WITNESS: Someone who read this would know</p> <p>17 that Google had run an experiment, although the details</p> <p>18 of that experiment would still remain somewhat opaque.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. Do you have any reason to doubt that the</p> <p>21 factual statement that Google had "applied optimized</p> <p>22 pricing to about 15% of transactions creating over 5% in</p> <p>23 lift in revenue for publishers using the Open Auction"?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: I don't have a reason to doubt</p>	<p style="text-align: right;">Page 221</p> <p>1 unlikely that 100,000 companies read this blog post.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. You don't know if it was 1,000 companies or</p> <p>4 25,000 companies, right?</p> <p>5 MR. RENARD: Same objection.</p> <p>6 THE WITNESS: I do not know the number of</p> <p>7 companies who read this blog post. And I do know that</p> <p>8 the information in this blog post, while it was</p> <p>9 providing what I think many publishers would consider to</p> <p>10 be good news, it's providing what many advertisers would</p> <p>11 consider to be bad news, and it was posted in a place</p> <p>12 where it was unlikely to be seen by buyers.</p> <p>13 MR. ROSSON: Object as nonresponsive after, I</p> <p>14 don't know.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Are you able to give me the names of the</p> <p>17 companies that read this blog post?</p> <p>18 A. I'm not.</p> <p>19 Q. What about one of them?</p> <p>20 A. I think pursuant to NDA agreements I have, I</p> <p>21 can't give you the name of one, but I am aware of a</p> <p>22 company that read this blog post.</p> <p>23 Q. All right. I'm not going to put you on the</p> <p>24 spot and ask you the name of that company.</p> <p>25 Are you aware of more than five companies that</p>

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<p>1 read this blog post?</p> <p>2 A. I am not.</p> <p>3 Q. Okay. You can set that aside.</p> <p>4 Just to tell you where I am in your materials,</p> <p>5 I'm at Rebuttal Paragraph 81.</p> <p>6 A. Amazingly, I turned directly to it.</p> <p>7 MR. RENARD: Excuse me.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. Let me know when you're ready.</p> <p>10 A. Oh, sorry. I'm there.</p> <p>11 Q. Okay.</p> <p>12 Do you agree that it's common practice for</p> <p>13 advertisers to conduct online auction experiments?</p> <p>14 A. Yes. I think that for advertisers who are</p> <p>15 larger, it is somewhat common for them to conduct online</p> <p>16 auction experiments. Not all have an experimentation</p> <p>17 practice, but I've worked with a number who do.</p> <p>18 Q. Do you agree that it's common for publishers</p> <p>19 to conduct online auction experiments?</p> <p>20 A. Yes.</p> <p>21 Q. So, for example, online advertisers commonly</p> <p>22 run experiments to test the effectiveness of their</p> <p>23 marketing, right?</p> <p>24 A. Yes. I would say that many of those</p> <p>25 experiments I would not consider online auction</p>	<p>1 disclose those experiments, nor are other parties</p> <p>2 typically harmed in those experiments.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. We can agree that the norm for publishers and</p> <p>5 advertisers when they run experiments is not to disclose</p> <p>6 them to others, right?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I think we can agree that the</p> <p>9 norm for publishers and advertisers when they run</p> <p>10 experiments is not to disclose them because they are not</p> <p>11 causing harm to other participants in the advertising</p> <p>12 ecosystem.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. Have you ever seen an online advertiser issue</p> <p>15 a press release that it's running an experiment?</p> <p>16 A. I have certainly seen advertisers disclose</p> <p>17 results from their experiments and talk about those</p> <p>18 experiments and what they've learned from those</p> <p>19 experiments. I can't recall if it has been in the form</p> <p>20 of a press release specifically.</p> <p>21 Q. Do you recall in your career having seen</p> <p>22 millions of press releases disclosing advertiser and</p> <p>23 publisher experiments?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: No, I do not recall seeing</p>
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<p>1 experiments, but it is common for advertisers to run</p> <p>2 experiments to test the effectiveness of their</p> <p>3 marketing.</p> <p>4 Q. And publishers commonly run tests to assess</p> <p>5 the impact of site changes on revenue or ad views?</p> <p>6 THE REPORTER: I'm sorry, can you repeat that</p> <p>7 question? I did not get that.</p> <p>8 MR. ROSSON: Yes.</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Publishers commonly run tests to assess the</p> <p>11 impact of site changes on revenue or ad views; is that</p> <p>12 true?</p> <p>13 MR. RENARD: Objection to form.</p> <p>14 THE WITNESS: Yes, in particular, publishers</p> <p>15 commonly run tests to assess the impact of site changes</p> <p>16 on revenue.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Publishers and advertisers don't issue a</p> <p>19 public notice indicating they're going to run an</p> <p>20 experiment, do they?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: No. As I elucidate in my</p> <p>23 report, typically when advertisers and publishers are</p> <p>24 running experiments, the advertisers and publishers bear</p> <p>25 the cost of that experiment. And so they do not</p>	<p>1 millions of press releases.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. All right.</p> <p>4 Look at your Footnote 108, please. It's on</p> <p>5 Page 37 of your rebuttal.</p> <p>6 A. Okay, I've re-read it.</p> <p>7 Q. Okay. And it cites the Harvard Business</p> <p>8 Review as its first source, right?</p> <p>9 A. Yes.</p> <p>10 Q. And the quotation you indicated is, "Firms</p> <p>11 that do experiment tend to run more than one experiment</p> <p>12 in a year, averaging 15 experiments per firm in</p> <p>13 E-commerce and close to 50 in the travel sector."</p> <p>14 Do you see that?</p> <p>15 A. I do see that.</p> <p>16 Q. Any reason to believe those numbers are not</p> <p>17 correct?</p> <p>18 A. No, I have no reason to doubt those numbers.</p> <p>19 Q. Okay.</p> <p>20 And how many advertisers would you expect are</p> <p>21 transacting on AdX in a given day?</p> <p>22 MR. RENARD: Objection. Form.</p> <p>23 THE WITNESS: [REDACTED]</p> <p>24 [REDACTED].</p> <p>25</p>

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<p>1 BY MR. ROSSON:</p> <p>2 Q. [REDACTED]</p> <p>3 if each advertiser runs 15 experiments a year, how many</p> <p>4 total experiments is that?</p> <p>5 A. I think that is a misapplication of my</p> <p>6 understanding of this article, because this article is</p> <p>7 talking about large advertisers, and that number is --</p> <p>8 the number of large advertisers transacting on AdX in</p> <p>9 any given day is much smaller than the total number of</p> <p>10 advertisers.</p> <p>11 Q. Give me your estimate in a given year of the</p> <p>12 number of large advertisers transacting on AdX.</p> <p>13 MR. RENARD: Objection. Form.</p> <p>14 THE WITNESS: [REDACTED].</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Okay. So if each one is running 15</p> <p>17 experiments, [REDACTED] by publishers or</p> <p>18 advertisers a year on AdX, right?</p> <p>19 A. Not all of the experiments run by large</p> <p>20 advertisers are run on AdX.</p> <p>21 Q. What would be a reasonable estimate for large</p> <p>22 advertisers of how many of their experiments are run on</p> <p>23 AdX?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: Using the estimates from this</p>	<p>1 absorb the cost of their experiments themselves, right?</p> <p>2 A. The vast majority of marketing companies that</p> <p>3 conduct experiments run those experiments in such a way</p> <p>4 that those companies are paying the cost of that</p> <p>5 experiment and they are not transferring that cost to</p> <p>6 their customers.</p> <p>7 Q. If an advertiser wins an impression because of</p> <p>8 an experiment it's running, does the advertiser issue a</p> <p>9 credit to the next highest bidder?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: No, I don't think the advertiser</p> <p>12 typically knows the identity of the next highest bidder.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. So if an advertiser runs an experiment to,</p> <p>15 say, increase the amount it's willing to pay for an</p> <p>16 impression, it might win more impressions, right?</p> <p>17 A. Yes. It would win more impressions and it</p> <p>18 would pay for those impressions.</p> <p>19 Q. By virtue of the fact that that advertiser</p> <p>20 would win more impressions, there would be less</p> <p>21 impressions available for all other advertisers, right?</p> <p>22 MR. RENARD: Objection. Form.</p> <p>23 THE WITNESS: Yes.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Would that advertiser who won more impressions</p>
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<p>1 article of 15 experiments per firm, I would expect zero</p> <p>2 or one of those experiments would be on AdX.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. And why is that your expectation?</p> <p>5 A. I do extensive work with advertising</p> <p>6 experimentation online, and the fraction of experiments</p> <p>7 that I have seen advertisers run on AdX is below</p> <p>8 1/15th.</p> <p>9 Q. You do agree that both online advertisers and</p> <p>10 online publishers do experiment on AdX, correct?</p> <p>11 A. I agree that online advertisers experiment on</p> <p>12 AdX. And I agree that online publishers experiment with</p> <p>13 their ad inventory, and some of that ad inventory runs</p> <p>14 through AdX.</p> <p>15 Q. Okay.</p> <p>16 I'm looking at Rebuttal Paragraph 82. You</p> <p>17 say, "When marketing companies conduct experiments, they</p> <p>18 typically absorb the costs of those experiments rather</p> <p>19 than transferring them to their customers."</p> <p>20 Do you see that?</p> <p>21 A. I do see that.</p> <p>22 Q. That's not always true, is it?</p> <p>23 A. No. I use the word "typically" there</p> <p>24 intentionally.</p> <p>25 Q. Because marketing companies don't always</p>	<p>1 issue a credit to any other advertiser in the industry?</p> <p>2 MR. RENARD: Same objection as before.</p> <p>3 THE WITNESS: I may be confused on the</p> <p>4 foundation for this question, but I don't understand</p> <p>5 what credit would be offered. The advertiser in</p> <p>6 question would be winning more impressions, would be</p> <p>7 paying for those impressions, and to whom would that</p> <p>8 advertiser owe a credit?</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Let me see if I can be a little more clear.</p> <p>11 When you say that advertisers bear the cost of</p> <p>12 their experiments, you mean they pay for the impressions</p> <p>13 they win, right?</p> <p>14 A. I'm speaking more broadly about typical</p> <p>15 practices in digital marketing. So when I talk about</p> <p>16 advertisers running experiments, I'm talking about</p> <p>17 online auction experiments as you have been talking</p> <p>18 about, but also things like creative experiments where</p> <p>19 they test multiple creatives or experiments where they</p> <p>20 do geographic or temporal experimental designs to</p> <p>21 estimate the efficacy of those marketing channels.</p> <p>22 Q. And when an advertiser runs an online auction</p> <p>23 experiment, that online auction experiment can change</p> <p>24 other bidder behavior; is that correct?</p> <p>25 MR. RENARD: Objection. Form.</p>

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<p style="text-align: right;">Page 230</p> <p>1 THE WITNESS: Generally speaking, the pool of</p> <p>2 impressions transacted on AdX in any given day is so</p> <p>3 vast that I cannot think of a case where an advertiser</p> <p>4 would run an experiment and have sufficient scale to</p> <p>5 affect the bidding decisions of other advertisers in the</p> <p>6 same auction.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. When an online advertiser changes its behavior</p> <p>9 by engaging in an experiment, is it typical for that</p> <p>10 online advertiser to inform other participants in an</p> <p>11 auction that it has changed its behavior?</p> <p>12 MR. RENARD: Objection to form.</p> <p>13 THE WITNESS: That online advertiser does not</p> <p>14 know who else is participating in that auction.</p> <p>15 Moreover, that experiment is not causing harm to the</p> <p>16 other participants in that auction in the same way as</p> <p>17 the experiments we're talking about here and that I'm</p> <p>18 talking about in this section of my rebuttal report.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. I'm actually only asking about online</p> <p>21 advertiser conduct so that I can better understand</p> <p>22 advertiser experiments. Are you with me?</p> <p>23 A. I think so.</p> <p>24 Q. Okay.</p> <p>25 There would be no way for an online advertiser</p>	<p style="text-align: right;">Page 232</p> <p>1 Q. In that scenario, if an ad doesn't reach a</p> <p>2 consumer as a result, does the online advertiser</p> <p>3 compensate that consumer?</p> <p>4 MR. RENARD: Objection to form.</p> <p>5 THE WITNESS: So you're asking if an online</p> <p>6 advertiser by virtue of running an experiment wins fewer</p> <p>7 impressions and thereby exposes fewer consumers to its</p> <p>8 advertising, does it compensate those consumers for</p> <p>9 having not seen its advertising?</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Yes.</p> <p>12 A. No, advertisers do not do that.</p> <p>13 Q. Okay.</p> <p>14 Can you look at Rebuttal Paragraph 83, please.</p> <p>15 A. Okay.</p> <p>16 Q. You cite the NIH Guidelines for Ethical</p> <p>17 Research.</p> <p>18 Do you see that?</p> <p>19 A. Yes.</p> <p>20 Q. Is that the source you relied on for the</p> <p>21 statement, "Informed consent is a central tenet of</p> <p>22 experimentation"?</p> <p>23 A. Yes.</p> <p>24 Q. And you cite no other support for that</p> <p>25 statement, correct?</p>
<p style="text-align: right;">Page 231</p> <p>1 to communicate to other bidders in an impression auction</p> <p>2 that it had chosen to change its behavior due to an</p> <p>3 experiment.</p> <p>4 Do I have that right?</p> <p>5 MR. RENARD: Objection. Form.</p> <p>6 THE WITNESS: Yes.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Okay.</p> <p>9 Likewise, if an online advertiser engages in</p> <p>10 an experiment that lowers the efficacy of its marketing</p> <p>11 campaign and thereby that online advertiser gains fewer</p> <p>12 impressions, or has lower quality impressions, that's</p> <p>13 going to be my hypothetical. I'm going to stop and ask</p> <p>14 if that hypothetical makes sense to you so far.</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: Let me repeat it back to you and</p> <p>17 see if I understand.</p> <p>18 You're saying an online advertiser is engaging</p> <p>19 in an experiment and that is diminishing the efficacy of</p> <p>20 its marketing campaign so that it either wins fewer</p> <p>21 impressions or the impressions it wins are of lower</p> <p>22 quality, lower performance?</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. Yes.</p> <p>25 A. Okay.</p>	<p style="text-align: right;">Page 233</p> <p>1 A. No, but I have a great deal of experience with</p> <p>2 experimentation, experimentation on human subjects, and</p> <p>3 online advertising experiment and -- experiments, and so</p> <p>4 I'm familiar with this notion of informed consent from</p> <p>5 other contexts as well.</p> <p>6 Q. The NIH is the National Institute of Health,</p> <p>7 correct?</p> <p>8 A. That's correct.</p> <p>9 Q. It's a resource for medical consents, right?</p> <p>10 A. The NIH operates in many different fields, but</p> <p>11 it is the National Institute of Health and it is</p> <p>12 offering research guidelines typically for people who</p> <p>13 are doing research into health-related matters.</p> <p>14 Q. NIH's remit is the health of humans, right?</p> <p>15 A. Yes.</p> <p>16 Q. Are you saying there's a connection between</p> <p>17 standards governing human medical experimentation and</p> <p>18 Ad Exchange experimentation?</p> <p>19 A. I am saying that when an experiment has the</p> <p>20 possibility of causing material harm, that the ethical</p> <p>21 best practices are to have informed consent. So that</p> <p>22 consent needs to be free and prior to the experiment in</p> <p>23 addition to providing sufficient information so that the</p> <p>24 subject can determine whether or not to be the subject</p> <p>25 of that experiment.</p>

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<p style="text-align: right;">Page 234</p> <p>1 Q. When you say "material harm," what do you mean</p> <p>2 by "material"?</p> <p>3 A. In this case, I'm specifically thinking about</p> <p>4 some of the experiments that Google ran where they</p> <p>5 caused significant changes to publisher revenue or</p> <p>6 advertiser performance.</p> <p>7 Q. You agree there are differences between human</p> <p>8 medical experimentation and online advertising</p> <p>9 experimentation, right?</p> <p>10 A. Yes, I agree with that.</p> <p>11 Q. Okay.</p> <p>12 Online ad experimentation cannot result in</p> <p>13 death, right?</p> <p>14 A. That is correct.</p> <p>15 Q. It can't make people very sick?</p> <p>16 A. It can make businesses sick, but not people.</p> <p>17 Q. You aren't claiming that the conduct at issue</p> <p>18 in this case harmed anyone's health, are you?</p> <p>19 A. I'm not offering any opinions about the health</p> <p>20 impacts of Google's experimentation on people; I am</p> <p>21 offering opinions on the health of businesses.</p> <p>22 Q. Do you believe the NIH bioethics standard</p> <p>23 governs Google's conduct?</p> <p>24 A. I am not opining that it governs Google's</p> <p>25 conduct; I am offering it as one potential source of</p>	<p style="text-align: right;">Page 236</p> <p>1 experimentation and I think inform our understanding of</p> <p>2 ethical online advertising experimentation.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Can you point me to an example of a</p> <p>5 third-party source in any of your opinions that</p> <p>6 discusses the ethics of experimentation other than the</p> <p>7 National Institute of Health?</p> <p>8 A. I think the academic articles that I'm</p> <p>9 thinking of right now describe ethical experiments, but</p> <p>10 are not laying out a guideline of ethics for online</p> <p>11 experiments. They are talking about the same sort of</p> <p>12 framework that I'm describing where the entities that</p> <p>13 benefit from the experiment bear the cost of the</p> <p>14 experiment.</p> <p>15 Q. Do those articles use the term "ethics" at</p> <p>16 all?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: Off the top of my head, I don't</p> <p>19 know.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. You can't remember any source you cited that</p> <p>22 refers directly to ethics other than third-party</p> <p>23 depositions and the National Institute of Health,</p> <p>24 agreed?</p> <p>25 A. As I sit here right now, I cannot recall if</p>
<p style="text-align: right;">Page 235</p> <p>1 ethical conduct that Google had the option to follow.</p> <p>2 Q. It's, in fact, the only source for ethical</p> <p>3 conduct that you disclose in your opinions, right?</p> <p>4 MR. RENARD: Objection to form.</p> <p>5 THE WITNESS: I think there are many places</p> <p>6 within this report where I touch on what makes</p> <p>7 experiments and advertising experiments ethical or not,</p> <p>8 but I am offering this footnote as explanation and basis</p> <p>9 for the term "informed consent" here in my statement</p> <p>10 that it is a central tenet of experimentation generally.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. In terms of third-party standards for whether</p> <p>13 conduct is ethical or not, are your opinions disclosing</p> <p>14 any source other than the National Institute of Health?</p> <p>15 MR. RENARD: Objection. Form.</p> <p>16 THE WITNESS: I think that third-party</p> <p>17 depositions touch on ethical experimentation and</p> <p>18 fairness and transparency in experimentation. So I</p> <p>19 would say that, yes, I am disclosing other sources.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Anything other than third-party depositions</p> <p>22 and the National Institute of Health?</p> <p>23 MR. RENARD: Objection to form.</p> <p>24 THE WITNESS: A number of the academic</p> <p>25 articles that I cite in this rebuttal report touch on</p>	<p style="text-align: right;">Page 237</p> <p>1 any other sources mention ethics by name.</p> <p>2 Q. Okay.</p> <p>3 MR. ROSSON: We have been going for a while.</p> <p>4 You guys want to take a break?</p> <p>5 MR. RENARD: Sure.</p> <p>6 THE VIDEOGRAPHER: This concludes Media 6. We</p> <p>7 are going off the record at 5:04 p.m.</p> <p>8 (RECESS TAKEN)</p> <p>9 THE VIDEOGRAPHER: This is the start of</p> <p>10 Media 7. We are back on the record at 5:26 p.m.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Dr. Chandler, any testimony from today that</p> <p>13 you'd like to change or correct?</p> <p>14 A. No.</p> <p>15 Q. Could you look at Paragraph 356 of your</p> <p>16 opening report? Let me know when you've had a chance to</p> <p>17 read that paragraph.</p> <p>18 A. I've read it.</p> <p>19 Q. Is it your criticism that Bernanke helped</p> <p>20 advertisers at the expense of -- sorry.</p> <p>21 Is your criticism that Bernanke helped GDN</p> <p>22 advertisers at the expense of non-GDN advertisers?</p> <p>23 A. Yes. I would expand that a little bit to say</p> <p>24 that my criticism is that Bernanke and Global Bernanke</p> <p>25 privileged GDN advertisers participating in AdX over</p>

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<p style="text-align: right;">Page 238</p> <p>1 non-GDN advertisers participating in AdX. 2 Q. And how were GDN advertisers hurt? 3 A. GDN advertisers were harmed by the inability 4 to understand the auction dynamics and perform analyses 5 that would inform future bidding strategies. 6 Q. You agree with me that not all advertisers 7 perform analyses to inform future bidding strategies, 8 right? 9 A. Yes, I would agree that some advertisers 10 perform these analyses and some advertisers do not. 11 Q. Okay. 12 On Paragraph 357, one below, you write, "Other 13 exchanges were harmed because AdX completed manipulated 14 auctions that would not have been completed otherwise; 15 and therefore, would not have been available to other 16 auctions." 17 Do you see that? 18 A. I do. 19 Q. I want to make sure I understand what you 20 mean. Do you mean that Bernanke caused AdX to win 21 auctions that therefore its competitors could not win? 22 A. I'm saying that Bernanke allowed AdX to win 23 auctions in situations where competitors might have won 24 those auctions. 25 Q. And in your opinion, was that -- is that</p>	<p style="text-align: right;">Page 240</p> <p>1 A. I would calculate it by looking at a fraction 2 of large advertisers who engage in detailed analyses of 3 the auction data resulting from their participation in 4 online auctions. 5 Q. In that group of 90 percent of large 6 advertisers under discussion, is it your position that 7 all of them had an economic loss because of Bernanke? 8 MR. RENARD: Objection to form. 9 THE WITNESS: I'm not offering an opinion on 10 economic loss; I'm offering an opinion here on the ways 11 in which Bernanke was not disclosed and the potential 12 harms that that caused to participants in the auction. 13 But I am offering that opinion from the perspective of a 14 marketing expert. And the harms I'm talking about are 15 primarily related to the ways in which it would harm 16 their marketing activities. 17 BY MR. ROSSON: 18 Q. If large advertisers had an economic gain from 19 Bernanke, would you expect them to object to it? 20 MR. RENARD: Objection to form. 21 THE WITNESS: I think it depends. 22 BY MR. ROSSON: 23 Q. On what? 24 A. On -- 25 MR. RENARD: Same objection.</p>
<p style="text-align: right;">Page 239</p> <p>1 wrong? 2 A. In my opinion, Bernanke departed from 3 generally accepted auction dynamics in the industry in 4 ways that were potentially deceptive to other exchanges. 5 Q. If Bernanke were fully disclosed in every 6 detail, do you believe all advertisers would object to 7 it? 8 MR. RENARD: Objection to form. 9 THE WITNESS: I think that a large number of 10 advertisers would object to it, but I'm not opining that 11 all advertisers would object to it. 12 BY MR. ROSSON: 13 Q. What percentage would object to it? 14 MR. RENARD: Same objection. 15 THE WITNESS: Based on my review of the 16 materials in this case and my experience in the 17 industry, and the advertisers that I've worked with, I 18 would expect 90 percent or more of large advertisers to 19 object it and a smaller fraction of small advertisers. 20 BY MR. ROSSON: 21 Q. What fraction for small advertisers? 22 A. I don't think I can give a precise estimate of 23 that fraction. 24 Q. If I want to derive that 90 percent figure for 25 large advertisers, how do I calculate it?</p>	<p style="text-align: right;">Page 241</p> <p>1 THE WITNESS: I think the potential objections 2 that large advertisers would have could be related to 3 the economic impact. It could also be related to the 4 way in which information was manipulated, and the way in 5 which the models and insights, the advertisers were 6 trying to glean from the auction data they were seeing 7 would be impacted. 8 BY MR. ROSSON: 9 Q. Has Bernanke been disclosed today? 10 MR. RENARD: Objection to form. 11 THE WITNESS: Yes. As of this lawsuit, 12 Bernanke has been generally disclosed in the industry. 13 BY MR. ROSSON: 14 Q. Did that cause a dec- -- I'm sorry, were you 15 finished? 16 A. I was finished. 17 Q. Did that cause a decline in AdX auction 18 traffic? 19 A. I don't know the impact of that disclosure on 20 AdX auction traffic. But even if advertisers were 21 harmed, it is possible that we would not see a change in 22 AdX auction traffic because AdX represents a significant 23 market share of online exchanges and provides access to 24 inventory that advertisers cannot access in other ways. 25 Q. The answer to the question of whether the</p>

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<p style="text-align: right;">Page 242</p> <p>1 disclosure of Bernanke caused a decrease in AdX auction</p> <p>2 traffic is that you don't know, right?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: That's correct. But I was also</p> <p>5 offering that regardless of the direction of AdX auction</p> <p>6 traffic, advertisers could be harmed.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Do you know of an advertiser that decided not</p> <p>9 to advertise on AdX because of Bernanke?</p> <p>10 A. I do not know of an advertiser who decided not</p> <p>11 to advertise on AdX because of Bernanke.</p> <p>12 Q. What about a publisher?</p> <p>13 MR. RENARD: Objection to form.</p> <p>14 THE WITNESS: I do not know of a publisher who</p> <p>15 stopped participating with AdX because of Bernanke.</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. Are you offering opinions about Elmo?</p> <p>18 A. I consider Elmo to be a deceptive practice,</p> <p>19 and so I have mentioned Elmo in my Opinion 17, if I</p> <p>20 recall.</p> <p>21 Q. What is Elmo?</p> <p>22 A. Elmo was a conduct by Google used to -- where</p> <p>23 Google used data from DV360 to identify -- I believe it</p> <p>24 was to identify exchanges that were not running a true</p> <p>25 second-price auction. Although, I might be confusing it</p>	<p style="text-align: right;">Page 244</p> <p>1 discuss Bell, if that recollection is correct. I do not</p> <p>2 recall where Poirot and Elmo are discussed, if at all,</p> <p>3 in my reports.</p> <p>4 Q. Are you maintaining your opinion as to whether</p> <p>5 Poirot, Bell, and Elmo are deceptive?</p> <p>6 A. I am maintaining my opinion that Poirot and</p> <p>7 Elmo represent conducts that I outline in my report,</p> <p>8 particularly the equal access and functionality aspect.</p> <p>9 Q. Are you offering an opinion that publishers or</p> <p>10 advertisers were deceived?</p> <p>11 A. What is the context for your question?</p> <p>12 Q. Both of your reports.</p> <p>13 A. Yes, I am offering an opinion that publishers</p> <p>14 and advertisers did not have the necessary information</p> <p>15 they needed to carry out their business, and that</p> <p>16 information was held by Google as part of the materials</p> <p>17 that I've reviewed in this case and they were not</p> <p>18 disclosed.</p> <p>19 Q. And that that caused publishers and</p> <p>20 advertisers to be deceived?</p> <p>21 A. It caused the potential for harm and it</p> <p>22 prevented advertisers and publishers from being able to</p> <p>23 participate in the market as efficiently as they could</p> <p>24 have otherwise.</p> <p>25 Q. Are you offering an opinion that publishers or</p>
<p style="text-align: right;">Page 243</p> <p>1 with Poirot, which is P-o-i-r-o-t.</p> <p>2 Q. Other than mentioning Poirot and Elmo and Bell</p> <p>3 in your Opinion 17, do you discuss them at all in your</p> <p>4 report?</p> <p>5 A. I can't recall if I do. I flipped through the</p> <p>6 remaining portion of my Section 10 and did not see it on</p> <p>7 a quick pass.</p> <p>8 Q. If a reader did not know what Elmo, Poirot,</p> <p>9 and Bell were, could they read your opinions and learn</p> <p>10 that information?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I think they would have to read</p> <p>13 the materials I'm relying upon, which would be the</p> <p>14 Weinberg description and analysis of the conducts.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. Okay. So it's your position that</p> <p>17 Dr. Weinberg, the portions you're relying on, he</p> <p>18 discusses Poirot, Elmo, or Bell?</p> <p>19 A. That is my recollection is that Weinberg</p> <p>20 discusses these conducts.</p> <p>21 Q. Okay. And is there a portion of your opinions</p> <p>22 anywhere in the opening or rebuttal that discusses</p> <p>23 Poirot, Elmo, or Bell?</p> <p>24 A. My recollection is that Bell was a code name</p> <p>25 for aspects of Project Bernanke. So in that sense I</p>	<p style="text-align: right;">Page 245</p> <p>1 advertisers were actually harmed?</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: I'm offering opinions about the</p> <p>4 harms related to information, but I'm not offering</p> <p>5 opinions about economic harm.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. Could you look at Paragraph 233 of your</p> <p>8 opening report, please. And specifically the last</p> <p>9 sentence.</p> <p>10 A. Yes, I've read it.</p> <p>11 Q. That last sentence reads, "If the DoubleClick</p> <p>12 acquisition had not been approved, this present lawsuit</p> <p>13 would not be necessary."</p> <p>14 Do you see that?</p> <p>15 A. I do see that.</p> <p>16 Q. Is that your position?</p> <p>17 A. Yes.</p> <p>18 Q. What do you mean by that?</p> <p>19 A. What I mean by that is Google's acquisition of</p> <p>20 DoubleClick set into motion a process that resulted in</p> <p>21 this lawsuit.</p> <p>22 Q. Do you know whether Google's DoubleClick</p> <p>23 acquisition was reviewed by regulators?</p> <p>24 A. Yes.</p> <p>25 Q. Okay.</p>

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<p style="text-align: right;">Page 246</p> <p>1 You cite a dissent in your opinions. Do you</p> <p>2 remember that?</p> <p>3 A. Yes.</p> <p>4 Q. Okay. Was the person dissenting in the</p> <p>5 majority or the minority?</p> <p>6 A. The person dissenting was in the minority.</p> <p>7 Q. Okay.</p> <p>8 Do you take issue with any regulatory action</p> <p>9 in approving the DoubleClick acquisition?</p> <p>10 MR. RENARD: Objection to form.</p> <p>11 THE WITNESS: I am not a regulator. I am not</p> <p>12 an economist. Sitting here as an industry practitioner,</p> <p>13 as I state in this paragraph, I view this present</p> <p>14 lawsuit as the chickens coming home to roost from the</p> <p>15 decision to approve the DoubleClick acquisition in 2007.</p> <p>16 BY MR. ROSSON:</p> <p>17 Q. By that do you mean the DoubleClick</p> <p>18 acquisition should not have been approved?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: I'm not offering an opinion on</p> <p>21 that, but I am connecting the dots between the approval</p> <p>22 of that acquisition and the present lawsuit.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. What does it mean in your opinion for a</p> <p>25 company to be dominant in a market?</p>	<p style="text-align: right;">Page 248</p> <p>1 I have not done any further analysis.</p> <p>2 Q. Could you look at your rebuttal report,</p> <p>3 Paragraph 97, please.</p> <p>4 Oh, I'm sorry, one more question on that.</p> <p>5 When you say that a company is "dominant," are</p> <p>6 you saying that that violates the antitrust laws?</p> <p>7 MR. RENARD: Objection to form.</p> <p>8 THE WITNESS: I'm not offering an opinion on</p> <p>9 antitrust laws.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Okay.</p> <p>12 Rebuttal Paragraph 97, please. Let me know</p> <p>13 when you've had a chance to read that.</p> <p>14 A. I've re-read it.</p> <p>15 Q. Okay.</p> <p>16 Do you see where you write, "Google's user</p> <p>17 data has no equal in the digital marketing world,</p> <p>18 combining data from Search, Gmail, Maps, YouTube,</p> <p>19 Android, and other advertising products"?</p> <p>20 A. I would just amend that slightly to say "and</p> <p>21 their advertising products," but yes.</p> <p>22 Q. Apologies. Correct.</p> <p>23 Did you do any quantitative analysis of how</p> <p>24 much data Google has?</p> <p>25 A. I have worked extensively with Google data,</p>
<p style="text-align: right;">Page 247</p> <p>1 A. I think it means that it is very hard for</p> <p>2 market participants to avoid using a company's products</p> <p>3 or services in that market.</p> <p>4 Q. Is there a market share that you have in mind</p> <p>5 in determining whether a company's dominant?</p> <p>6 MR. RENARD: Objection. Form.</p> <p>7 THE WITNESS: No. When I talk about Google's</p> <p>8 dominant position, I'm talking about both its market</p> <p>9 share and then other things like unique sources of</p> <p>10 inventory.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Are you offering any opinions about market</p> <p>13 share quantitatively?</p> <p>14 A. I have opinions in my report about market</p> <p>15 share of some of Google's products. They are supported</p> <p>16 by pieces of evidence, typically third-party testimony.</p> <p>17 So I'm reporting that information such as in</p> <p>18 Paragraph 234 and Paragraph 236, where I quote industry</p> <p>19 participants estimating market share, but that is the</p> <p>20 extent to which I am offering quantitative market share</p> <p>21 estimates.</p> <p>22 Q. You have not done an independent market share</p> <p>23 analysis, correct?</p> <p>24 A. Other than in the sense that I have</p> <p>25 synthesized this information and added it to my report,</p>	<p style="text-align: right;">Page 249</p> <p>1 and from that industry work have a sense for the scale</p> <p>2 and scope and quality of Google's data, and so that I</p> <p>3 would consider analysis of Google's data.</p> <p>4 Q. Have you disclosed in your opinions how much</p> <p>5 data Google has?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: I list the data sources and</p> <p>8 describe the quality and in both reports talk about the</p> <p>9 importance of data, but I am not quantifying the amount</p> <p>10 of data that Google has.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. Do you have an opinion on whether search data</p> <p>13 is used in online advertising products?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: I believe that some of the</p> <p>16 opinions in my opening report mention the power of being</p> <p>17 able to target on search data. And so I think those</p> <p>18 opinions talk about the use of search data in online</p> <p>19 advertising.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. Do you have a position on whether Google Ad</p> <p>22 Manager utilizes search data?</p> <p>23 A. I do not have a position on that.</p> <p>24 Q. Do you know one way or the other?</p> <p>25 A. I do not know if Google Ad Manager uses online</p>

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<p style="text-align: right;">Page 250</p> <p>1 search data.</p> <p>2 Q. Same question for AdX.</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: I believe that search data is</p> <p>5 used as part of Google's estimates of the quality of</p> <p>6 impressions on AdX. So I think the answer is, yes, I</p> <p>7 think search data is used within AdX.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. What is the basis for that belief?</p> <p>10 A. My prior understanding of targeting options</p> <p>11 available via AdX.</p> <p>12 Q. In your professional work?</p> <p>13 A. Yes.</p> <p>14 Q. When you write that, "Google's user data has</p> <p>15 no equal in the digital marketing world, combining data</p> <p>16 from Search, Gmail, Maps, YouTube, Android," are you</p> <p>17 indicating that data from all of those categories,</p> <p>18 Search, Gmail, Maps, YouTube, Android, is utilized by</p> <p>19 Google in its online advertising tech stack?</p> <p>20 MR. RENARD: Objection to form.</p> <p>21 THE WITNESS: Certainly all of those sources</p> <p>22 of data are used by Google in its various online</p> <p>23 advertising products.</p> <p>24 BY MR. ROSSON:</p> <p>25 Q. Is it your position that all of these</p>	<p style="text-align: right;">Page 252</p> <p>1 THE WITNESS: Can you repeat that last</p> <p>2 question?</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Yes.</p> <p>5 What is the basis for your statement that</p> <p>6 Gmail data is used for open web display advertising?</p> <p>7 A. I have worked on advertising campaigns where</p> <p>8 Gmail data was used for targeting variables.</p> <p>9 Q. What do you mean "targeting variables"?</p> <p>10 A. Gmail data flowed into the creation of</p> <p>11 variables that could be used for targeting open web</p> <p>12 display advertising.</p> <p>13 Q. Could you explain that one more level of</p> <p>14 detail?</p> <p>15 A. Yes.</p> <p>16 Data from Gmail that includes information</p> <p>17 about how consumers have interacted with ads that Google</p> <p>18 has placed within Gmail inboxes can be used for</p> <p>19 targeting variables on open web display.</p> <p>20 Q. Give me an example of a targeting variable.</p> <p>21 A. Interest in sports.</p> <p>22 Q. I'm going to shift gears on you a little bit.</p> <p>23 Is it your opinion that cookie matching is</p> <p>24 unethical?</p> <p>25 MR. RENARD: Objection to form.</p>
<p style="text-align: right;">Page 251</p> <p>1 categories of data are used for open web display</p> <p>2 advertising?</p> <p>3 A. I am not offering an opinion on whether all of</p> <p>4 those forms are being used for open web display.</p> <p>5 Q. Okay.</p> <p>6 Just to make sure I didn't misask the</p> <p>7 question, do you have an opinion on whether any of those</p> <p>8 categories -- Search, Gmail, Maps, YouTube, Android --</p> <p>9 are used for online display advertising?</p> <p>10 A. For open web display advertising, I have</p> <p>11 experience using data from Search, Gmail, Maps. Direct</p> <p>12 professional experience. YouTube data is typically used</p> <p>13 as part of video advertising, and I do not have direct</p> <p>14 experience with using it for open web display. And data</p> <p>15 from Android devices is used as part of mobile open web</p> <p>16 display.</p> <p>17 Q. Explain what you mean that Gmail data is used</p> <p>18 in open web display advertising.</p> <p>19 A. I'm just going to pause for a second.</p> <p>20 Something is happening on the monitor here.</p> <p>21 MR. ROSSON: You guys want to go off the</p> <p>22 record?</p> <p>23 MR. GONSOULIN: Yeah.</p> <p>24 THE WITNESS: It's fixed now.</p> <p>25 MR. ROSSON: Okay.</p>	<p style="text-align: right;">Page 253</p> <p>1 THE WITNESS: Can you give me the context for</p> <p>2 that question?</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. I'm looking at opening report Paragraph 279.</p> <p>5 A. In the context that I discuss cookie matching</p> <p>6 in Paragraph 279, and describe the way in which actions</p> <p>7 are tracked online, I do not think that cookie matching</p> <p>8 is unethical.</p> <p>9 Q. What about the placement of cookies in a</p> <p>10 browser?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I do not consider that</p> <p>13 unethical.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Shifting gears again.</p> <p>16 Have you ever published a peer-reviewed</p> <p>17 article that included a survey?</p> <p>18 A. Yes.</p> <p>19 Q. Can you tell me what it is?</p> <p>20 A. Yes. I'll refer to my CV.</p> <p>21 Q. While you're doing that, is it the forestry?</p> <p>22 A. It is the one on invasive weeds.</p> <p>23 Q. Okay.</p> <p>24 A. So the two articles: "Effective Weed</p> <p>25 Management, Collective Action, and Land Ownership Change</p>

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<p style="text-align: right;">Page 254</p> <p>1 in Western Montana," used in an extensive survey. "The 2 Wilderness Politics in the American West" used the same 3 survey data. And the "Making Time, Words, Narratives 4 and Clocks in Elementary Mathematics" used something 5 that I think math education researchers would consider a 6 survey instrument. 7 Q. Did you design those survey instruments? 8 A. I was part of a team designing them. 9 Q. Have you ever published a peer-reviewed 10 article relating to online marketing that utilized the 11 survey? 12 A. No. My online peer-reviewed articles have not 13 used surveys to study online marketing. 14 Q. Have you ever taught an undergraduate or 15 graduate course on how to scientifically conduct a 16 survey? 17 A. I've taught classes that cover scientific 18 survey design and analysis as part of the course 19 material, but I have not taught a standalone course on 20 survey design and analysis. 21 Q. Do you agree that surveys are commonly used as 22 tools in online advertising? 23 MR. RENARD: Objection to form. 24 THE WITNESS: Yes, I have used surveys in 25 online advertising a great deal.</p>	<p style="text-align: right;">Page 256</p> <p>1 of things I learn in the industry, would you consider 2 that a robust dataset? 3 MR. RENARD: Objection to form. 4 THE WITNESS: It does depend on the context. 5 BY MR. ROSSON: 6 Q. Okay. Would you agree that that dataset would 7 be subject to the limitations of my own memory? 8 A. I think if you were relying exclusively on 9 your memory and no additional artifacts created along 10 the way, no information you had recorded during the 11 time, then, yes, your memory would be the limiter. When 12 I talk about my experience, I'm including those other 13 things as well. 14 Q. Well, other than your resumé and the accounts 15 of your memories in your opening and rebuttal report, we 16 don't have an independent source of your memories, do 17 we? 18 MR. RENARD: Objection to form. 19 THE WITNESS: What do you mean by 20 "independent" here? 21 BY MR. ROSSON: 22 Q. There's no record of peer-reviewed literature 23 that we can look back to that would contain your 24 memories about the online advertising space, correct? 25 MR. RENARD: Objection to the form of the</p>
<p style="text-align: right;">Page 255</p> <p>1 BY MR. ROSSON: 2 Q. And you agree that surveys can be powerful 3 tools, correct? 4 MR. RENARD: Objection to form. 5 THE WITNESS: I think it really depends on the 6 survey, but important information can be gleaned from 7 surveys. 8 BY MR. ROSSON: 9 Q. If I went around and talked to people in the 10 industry and told you generally what I heard, would you 11 view that as a source of data just as good as a 12 scientific survey? 13 MR. RENARD: Objection to form. 14 THE WITNESS: I think it would depend on both 15 aspects of the methods you used talking to people in the 16 industry and the surveying question. 17 BY MR. ROSSON: 18 Q. What if I just used like my general memory of 19 things I heard in the industry? 20 MR. RENARD: Objection to form. 21 THE WITNESS: Again, I think it would depend 22 on the survey you were comparing it to. 23 BY MR. ROSSON: 24 Q. Okay. 25 As a statistician, if I gave you my memories</p>	<p style="text-align: right;">Page 257</p> <p>1 question. 2 THE WITNESS: We have documents such as my 3 dissertation and we have other peer-reviewed literature 4 that I'm offering as support for my opinions. 5 BY MR. ROSSON: 6 Q. Remind me what your dissertation was in. 7 A. The title of my dissertation was "Measuring 8 Conversions in Online Advertising," and it was in 9 statistics. 10 Q. And remind me what statistical analysis you 11 applied to the dataset there. 12 A. In that case I was working with a large 13 dataset of cookie level records. And the statistical 14 analysis I applied particularly to model conversions was 15 a Cox proportional hazard model with time varying 16 covariants. 17 Q. Do you believe that dissertation supports your 18 opinions in this case? 19 A. Some of my opinions are supported by that 20 dissertation, yes. 21 Q. How so? 22 A. Part of the dissertation analysis was 23 estimating the relative impact and efficacy of different 24 marketing channels across a variety of advertisers. And 25 my opinions partially relate to marketing channels,</p>

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<p style="text-align: right;">Page 258</p> <p>1 marketing efficacy, the use of data in marketing, and</p> <p>2 all of those opinions are supported --</p> <p>3 THE REPORTER: All of those what? Sorry.</p> <p>4 THE WITNESS: I'm sorry.</p> <p>5 All of those opinions are supported by my</p> <p>6 dissertation.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Did your dissertation concern what is fair or</p> <p>9 transparent?</p> <p>10 A. No.</p> <p>11 Q. Has any of your peer-reviewed work discussed</p> <p>12 what is fair or transparent?</p> <p>13 MR. RENARD: Objection. Form.</p> <p>14 THE WITNESS: Most of my peer-reviewed work</p> <p>15 had an IRB approval process, and so required fairness</p> <p>16 and transparency to do the research.</p> <p>17 BY MR. ROSSON:</p> <p>18 Q. Right. So, for example, your research</p> <p>19 underwent a process to check on whether you doctored</p> <p>20 data, for example, right?</p> <p>21 A. Yes, and also to ensure that the research was</p> <p>22 fair and ethical where it was studying humans.</p> <p>23 Q. Those standards are applied to the research</p> <p>24 you performed, correct?</p> <p>25 A. Those standards are part of the research</p>	<p style="text-align: right;">Page 260</p> <p>1 auction would look like. I was asked to opine on the</p> <p>2 extent to which Google's conducts negatively impacted</p> <p>3 the fairness and transparency.</p> <p>4 And in order to make it clear how I was</p> <p>5 interpreting that assignment, I added Footnote 9.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. Do you know of any online auction that meets</p> <p>8 all of your criteria in Footnote 9?</p> <p>9 A. In 2024, I do not have detailed knowledge of</p> <p>10 the underpinnings of current online auctions, but I have</p> <p>11 knowledge of auctions that have met these criteria in</p> <p>12 the past.</p> <p>13 Q. Which ones?</p> <p>14 MR. RENARD: Objection to form.</p> <p>15 THE WITNESS: At the time that we were at</p> <p>16 Microsoft working with AppNexus, the AppNexus auction</p> <p>17 met these criteria.</p> <p>18 BY MR. ROSSON:</p> <p>19 Q. Any other ones?</p> <p>20 A. That is the only auction environment where I</p> <p>21 have had a similar level of access to the underlying</p> <p>22 information as I've had in this case.</p> <p>23 Q. Okay.</p> <p>24 So if we're going to create a set of online</p> <p>25 auctions that you know to meet the criteria of your</p>
<p style="text-align: right;">Page 259</p> <p>1 process.</p> <p>2 Q. I'm asking whether you published any research</p> <p>3 answering the question of what is fair and what is</p> <p>4 transparent.</p> <p>5 MR. RENARD: Objection. Form.</p> <p>6 THE WITNESS: I don't have any peer-reviewed</p> <p>7 research on what is fair or what is transparent. My</p> <p>8 opinions related to fairness and transparency are based</p> <p>9 on my industry experience.</p> <p>10 BY MR. ROSSON:</p> <p>11 Q. Let's look next at your opening report,</p> <p>12 Paragraph 18.</p> <p>13 A. I've turned to that page.</p> <p>14 Q. And now I'm going to direct you to</p> <p>15 Subparagraph 5.</p> <p>16 Apologies. I'm going to direct you to</p> <p>17 specifically Footnote 9 within Subject -- within</p> <p>18 Subparagraph 5.</p> <p>19 Do you see that footnote?</p> <p>20 A. I do see that.</p> <p>21 Q. Were you asked to determine what a fair and</p> <p>22 transparent online auction would look like?</p> <p>23 MR. RENARD: Objection to form.</p> <p>24 THE WITNESS: I don't believe I was</p> <p>25 specifically asked to say what a fair and transparent</p>	<p style="text-align: right;">Page 261</p> <p>1 Footnote 9, it would be AppNexus when you worked at</p> <p>2 Microsoft; is that correct?</p> <p>3 MR. RENARD: Objection to the form of the</p> <p>4 question.</p> <p>5 THE WITNESS: Verifying this definition of</p> <p>6 fairness requires a level of access to the auction</p> <p>7 environment that to the best of my knowledge no current</p> <p>8 auction participants give out publicly. And so, yes,</p> <p>9 the only two auctions that I know of to a level of</p> <p>10 detail where I can assess their fairness are the</p> <p>11 AppNexus advertising auction when I worked at Microsoft,</p> <p>12 and the AdX auction over the time period that we're</p> <p>13 discussing for these conducts.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. So sitting here today in 2024, you can't name</p> <p>16 an auction that's presently running that meets the</p> <p>17 criteria in your Footnote 9; is that correct?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: Yes, because of a lack of</p> <p>20 information about the inner workings of those auctions,</p> <p>21 I do not know if auctions run by entities such as OpenX</p> <p>22 or Index Exchange meet these criteria.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. You don't know if there are several auctions</p> <p>25 that meet your Footnote 9 criteria or none at all,</p>

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<p style="text-align: right;">Page 262</p> <p>1 right?</p> <p>2 MR. RENARD: Objection to form.</p> <p>3 THE WITNESS: I do not know which auctions</p> <p>4 meet this criteria.</p> <p>5 BY MR. ROSSON:</p> <p>6 Q. Footnote 9 is a statement of your personal</p> <p>7 belief, correct?</p> <p>8 A. Footnote --</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: Footnote 9 is an opinion based</p> <p>11 on my industry experience about what would constitute a</p> <p>12 fair online auction.</p> <p>13 BY MR. ROSSON:</p> <p>14 Q. And after the first comma in Footnote 9, you</p> <p>15 write, "I believe," correct?</p> <p>16 A. Yes.</p> <p>17 Q. And what follows "I believe" is your belief,</p> <p>18 correct?</p> <p>19 MR. RENARD: Objection. Form.</p> <p>20 THE WITNESS: What follows "I believe" is my</p> <p>21 opinion.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Not your belief?</p> <p>24 A. And also --</p> <p>25 MR. RENARD: Objection to form of the</p>	<p style="text-align: right;">Page 264</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Do you believe people can believe different</p> <p>3 things?</p> <p>4 MR. RENARD: Objection to the form of the</p> <p>5 question.</p> <p>6 THE WITNESS: Yes, I believe that people can</p> <p>7 believe different things.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. In the framework of your Footnote 9, where you</p> <p>10 write, "I believe a fair and transparent online</p> <p>11 auction," and then continuing, within that framework, do</p> <p>12 parties have the freedom to contract?</p> <p>13 A. Yes.</p> <p>14 Q. Do you agree generally that people have</p> <p>15 different ideas about what's fair?</p> <p>16 MR. RENARD: Objection to the form of the</p> <p>17 question.</p> <p>18 THE WITNESS: In the context of my reports, I</p> <p>19 am describing fairness as it is generally accepted</p> <p>20 within the online advertising industry.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. I asked you last time about the</p> <p>23 American Marketing Association.</p> <p>24 Do you remember that?</p> <p>25 A. I can't recall what you mean by "last time."</p>
<p style="text-align: right;">Page 263</p> <p>1 question.</p> <p>2 THE WITNESS: It is both my opinion and my</p> <p>3 belief.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Beliefs are not objective facts, correct?</p> <p>6 MR. RENARD: Objection to the form of the</p> <p>7 question.</p> <p>8 THE WITNESS: One can use the expression "I</p> <p>9 believe" to talk about an objective fact. I believe</p> <p>10 that gravity is real. Saying "I believe it" does not</p> <p>11 make it not an objective fact.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. We get to pick our beliefs, right?</p> <p>14 MR. RENARD: Objection to the form of the</p> <p>15 question.</p> <p>16 THE WITNESS: I am not picking a belief in</p> <p>17 what constitutes a fair and transparent auction; I am</p> <p>18 attempting to describe a fair and transparent auction</p> <p>19 based on my industry experience.</p> <p>20 BY MR. ROSSON:</p> <p>21 Q. We get to pick our beliefs, right?</p> <p>22 MR. RENARD: Objection to the form of the</p> <p>23 question.</p> <p>24 THE WITNESS: No.</p> <p>25</p>	<p style="text-align: right;">Page 265</p> <p>1 Q. I'm sorry. Let me just ask you and we'll take</p> <p>2 it from there.</p> <p>3 Are you aware of organizations or associations</p> <p>4 that companies in the digital marketing space look to as</p> <p>5 authoritative?</p> <p>6 A. Yes.</p> <p>7 Q. Can you tell me what they are?</p> <p>8 A. There are several bodies that I cite in</p> <p>9 various sections of my two reports, including the</p> <p>10 Advertising Research Foundation, the</p> <p>11 Internet Advertising Bureau, the 4A's, and the American</p> <p>12 Marketing Association.</p> <p>13 Q. Okay. And to take them one by one, does the</p> <p>14 Advertising Research Foundation publish literature on</p> <p>15 fairness and transparency?</p> <p>16 A. The Advertising Research Foundation publishes</p> <p>17 guidelines governing online advertising. And some of</p> <p>18 those include information about fairness and</p> <p>19 transparency.</p> <p>20 Q. Did you derive your Footnote 9 from materials</p> <p>21 you reviewed from the Advertising Research Foundation,</p> <p>22 the Internet Advertising Bureau, or the 4A's?</p> <p>23 A. I'm basing Footnote 9 on my industry</p> <p>24 experience, not on information from those organizations.</p> <p>25 Q. If I want to corroborate your Footnote 9 by</p>

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<p style="text-align: right;">Page 266</p> <p>1 looking to one of these trade associations, can I do</p> <p>2 that?</p> <p>3 MR. RENARD: Objection to form.</p> <p>4 THE WITNESS: Yes. The American Marketing</p> <p>5 Association standards of ethical conduct inform</p> <p>6 Footnote 9.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Are you relying on the American Marketing</p> <p>9 Association's standards of ethical conduct in offering</p> <p>10 your opinions?</p> <p>11 A. No. The opinion in Footnote 9 is based on my</p> <p>12 industry experience.</p> <p>13 Q. Will I be able to look at the materials</p> <p>14 published by -- within the AMA standards of ethical</p> <p>15 conduct and find information about how to build a fair</p> <p>16 and transparent online auction?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: You will find the principles</p> <p>19 undergirding a fair and transparent online auction, but</p> <p>20 I don't believe you will find a guideline to building an</p> <p>21 auction.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Are you aware of the standards that you employ</p> <p>24 in Footnote 9 of your opening report having been used by</p> <p>25 anyone in any other context?</p>	<p style="text-align: right;">Page 268</p> <p>1 MR. RENARD: Same objection.</p> <p>2 THE WITNESS: I am not aware of an industry</p> <p>3 participant who is using my criteria exactly as it is,</p> <p>4 but my criteria describe a fair and transparent online</p> <p>5 auction that would be recognizable to industry</p> <p>6 participants on both the buy and sell side.</p> <p>7 BY MR. ROSSON:</p> <p>8 Q. Do you believe that if we were to -- I'm not</p> <p>9 saying we're going to do this. This is a hypothetical,</p> <p>10 okay? Are you with me so far?</p> <p>11 A. So far I'm with you.</p> <p>12 Q. Okay.</p> <p>13 If we were to make your Footnote 9 in your</p> <p>14 opening report public, do you believe all industry</p> <p>15 participants would agree with all of its criteria?</p> <p>16 A. I believe the vast majority of industry</p> <p>17 participants would agree with its criteria.</p> <p>18 Q. And when you say "vast majority," can you be</p> <p>19 more specific? Give me a percentage.</p> <p>20 A. I think if you asked industry participants, Do</p> <p>21 you consider the following standards to define a fair</p> <p>22 and transparent online auction, and listed my criteria,</p> <p>23 north of 90 percent would agree that it accords with</p> <p>24 their understanding of a fair and transparent online</p> <p>25 auction.</p>
<p style="text-align: right;">Page 267</p> <p>1 A. Again, the only other auction that I have the</p> <p>2 detailed knowledge of the inner workings of was the</p> <p>3 AppNexus auction and it conformed to these guidelines.</p> <p>4 Q. What I mean is, if I want to find an</p> <p>5 authoritative source to help me build a fair and</p> <p>6 transparent online auction, are you aware of any other</p> <p>7 material, aside from your opening report, that is going</p> <p>8 to lay out the criteria that you did in your Footnote 9?</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: I think in order to find an</p> <p>11 authoritative source that would lay out the criteria for</p> <p>12 a fair and transparent online auction, you would need to</p> <p>13 ask one or more additional industry experts.</p> <p>14 BY MR. ROSSON:</p> <p>15 Q. Are you aware of any industry experts who</p> <p>16 adopt your Footnote 9 as the standard for a fair and</p> <p>17 transparent online auction?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: Participants in the industry</p> <p>20 would recognize my definition as the description of a</p> <p>21 fair and transparent online auction.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Are you aware of any industry experts who have</p> <p>24 utilized your criteria for determining whether an</p> <p>25 auction is fair and transparent?</p>	<p style="text-align: right;">Page 269</p> <p>1 Q. Do you know of the industry getting together</p> <p>2 to publish a statement about what it believes is fair</p> <p>3 and transparent?</p> <p>4 MR. RENARD: Objection to the form.</p> <p>5 THE WITNESS: I do not know specifically of an</p> <p>6 industry gathering to discuss fairness and transparency</p> <p>7 in online auctions in this sense.</p> <p>8 BY MR. ROSSON:</p> <p>9 Q. As you use the term "fair," are you using that</p> <p>10 term objectively or subjectively?</p> <p>11 MR. RENARD: Objection to form.</p> <p>12 THE WITNESS: I'm using that term as an</p> <p>13 objective measure of equal dealing across participants</p> <p>14 on a given side of an auction.</p> <p>15 BY MR. ROSSON:</p> <p>16 Q. What about transparency; are you using that</p> <p>17 objectively or subjectively?</p> <p>18 A. Again, objectively. Transparency in this</p> <p>19 sense means disclosure of the auction rules and that is</p> <p>20 an objective measure.</p> <p>21 Q. Imagine you and I set up an online auction</p> <p>22 exchange. Are you with me?</p> <p>23 A. I am.</p> <p>24 Q. If we set up an exchange, are we obligated to</p> <p>25 disclose all of the auction rules to all participants?</p>

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<p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: What do you mean by "obligated"</p> <p>3 in this sense?</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Is it a requirement?</p> <p>6 MR. RENARD: Objection. Form.</p> <p>7 THE WITNESS: Again, I think the -- my</p> <p>8 question for clarification is a requirement by whom? A</p> <p>9 requirement to adhere to these standards or a</p> <p>10 requirement by an external party?</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. First let's start with a requirement by an</p> <p>13 external party.</p> <p>14 MR. RENARD: Objection to the form of the</p> <p>15 statement.</p> <p>16 THE WITNESS: I am not aware of an external</p> <p>17 party that would require us under this hypothetical of</p> <p>18 you and I getting together and setting up an online</p> <p>19 auction environment, a party that would require us to</p> <p>20 adhere to these standards.</p> <p>21 BY MR. ROSSON:</p> <p>22 Q. Are you aware of a third party requiring a</p> <p>23 company to adhere to any of the standards that you've</p> <p>24 mentioned in your opinions?</p> <p>25 MR. RENARD: Objection. Form.</p>	<p>1 MR. RENARD: Objection to form.</p> <p>2 THE WITNESS: Transparency on its own or in</p> <p>3 isolation does not define the competition between online</p> <p>4 auctions and exchanges, but it is an aspect of</p> <p>5 competition.</p> <p>6 BY MR. ROSSON:</p> <p>7 Q. Do you recall setting out some wish lists in</p> <p>8 your opening report?</p> <p>9 A. Yes.</p> <p>10 Q. All right. I want to turn to those and</p> <p>11 discuss them with you.</p> <p>12 A. Page 86 of the opening report?</p> <p>13 Q. Correct.</p> <p>14 You have a wish list for the buy side, the</p> <p>15 sell side, and the exchange; is that right?</p> <p>16 A. That's correct.</p> <p>17 Q. And are these the desires of -- on the buy</p> <p>18 side, are these the desires of all buyers?</p> <p>19 MR. RENARD: Objection to form.</p> <p>20 THE WITNESS: In this section I am attempting</p> <p>21 to lay out hypothetical information that the buy side,</p> <p>22 the sell side, and the exchange would wish to have or</p> <p>23 wish to be able to act upon, taking into account the</p> <p>24 totality of the participants.</p> <p>25 So I am not representing that all buyers would</p>
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<p>1 THE WITNESS: I am not aware of a third party</p> <p>2 requiring any particular set of standards for an online</p> <p>3 auction. I think that if you and I were to set up an</p> <p>4 online auction environment and we adhered to these</p> <p>5 standards, then we would be able to use those to attract</p> <p>6 advertisers and publishers to our auction environment.</p> <p>7 And if we did not adhere to those standards, we would</p> <p>8 have a much harder time of doing that.</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Online exchanges can compete on the basis of</p> <p>11 transparency, right?</p> <p>12 A. Online exchanges compete on a variety of</p> <p>13 bases, and transparency can be one of those.</p> <p>14 Q. So an online auction could seek to become more</p> <p>15 transparent to secure a competitive advantage over other</p> <p>16 auctions, right?</p> <p>17 MR. RENARD: Objection to form.</p> <p>18 THE WITNESS: There are many criteria that</p> <p>19 advertisers and publishers use to decide whether or not</p> <p>20 to use an online auction and transparency could be one</p> <p>21 of those, and an online auction could seek to compete on</p> <p>22 the basis of that transparency.</p> <p>23 BY MR. ROSSON:</p> <p>24 Q. At the online auction level, transparency is a</p> <p>25 form of competition, right?</p>	<p>1 want all of these pieces of information, but generally</p> <p>2 speaking, they would be advantageous to people on the</p> <p>3 buy side, for the buy side wish list.</p> <p>4 BY MR. ROSSON:</p> <p>5 Q. Look at Paragraph 337, please, where you</p> <p>6 write, "Another unethical practice would be prioritizing</p> <p>7 certain bids over others based on undisclosed criteria."</p> <p>8 Do you see that?</p> <p>9 A. I do see that.</p> <p>10 Q. What does "unethical" mean in that sense?</p> <p>11 A. What I mean is that if an exchange or auction</p> <p>12 was putting its thumb on the scale in a set of online</p> <p>13 auctions and prioritizing certain bids over others based</p> <p>14 on mechanisms that were not disclosed, then that would</p> <p>15 be unfair to some auction participants.</p> <p>16 Q. Is whether an action is ethical or unethical a</p> <p>17 subjective question?</p> <p>18 MR. RENARD: Objection to form.</p> <p>19 THE WITNESS: There are generally accepted</p> <p>20 standards of ethics within marketing in terms of fair</p> <p>21 dealing, and so I think in that sense it is objective.</p> <p>22 BY MR. ROSSON:</p> <p>23 Q. Where can I find these general standards of</p> <p>24 fair dealing for marketing practice?</p> <p>25 MR. RENARD: Objection to form.</p>

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<p>1 THE WITNESS: Again, places like the AMA</p> <p>2 standards of ethics.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. And do those -- let's take the AMA standards</p> <p>5 of ethics. Is that cited in your reports, by the way?</p> <p>6 A. It is not. I did not need to cite that in</p> <p>7 order to form these opinions, as this particular opinion</p> <p>8 in Paragraph 337 is based on my industry experience.</p> <p>9 Q. You didn't rely on the AMA standard of ethics?</p> <p>10 Did I say that correctly? AMA.</p> <p>11 A. [No response.]</p> <p>12 Q. Okay. Apologies. Let me start over.</p> <p>13 You didn't rely on the AMA standards of ethics</p> <p>14 for any of your opinions, right?</p> <p>15 A. That's correct. Those ethical standards are</p> <p>16 not part of my reliance list.</p> <p>17 Q. Okay.</p> <p>18 On the exchange wish list, are there other</p> <p>19 practices aside from Paragraph 337 that are unethical in</p> <p>20 your opinion?</p> <p>21 A. As I say in Paragraph 340, "In sum, if</p> <p>22 exchanges were willing to be unethical, they can</p> <p>23 manipulate the auction process through practices like</p> <p>24 last-look bidding, dynamic take rate adjustments, bid</p> <p>25 prioritization, altering auction mechanics, and</p>	<p>1 industry, buyers and sellers tend to act ethically.</p> <p>2 BY MR. ROSSON:</p> <p>3 Q. And in your opinion, if exchanges had their</p> <p>4 way, they would want to do unethical things; is that</p> <p>5 right?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: That's not what I'm opining</p> <p>8 here; I am describing ways in which exchanges could take</p> <p>9 advantage of their position in the market to act</p> <p>10 unethically.</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. You call it their wish list, right?</p> <p>13 A. I do call it the wish list.</p> <p>14 Q. Things they wish for?</p> <p>15 MR. RENARD: Objection to form.</p> <p>16 THE WITNESS: I am not offering an opinion on</p> <p>17 the extent to which exchanges desire to behave in this</p> <p>18 way. I'm attempting to describe those behaviors here.</p> <p>19 BY MR. ROSSON:</p> <p>20 Q. What does the word "wish" mean?</p> <p>21 MR. RENARD: Objection to form.</p> <p>22 THE WITNESS: I acknowledge that the word</p> <p>23 "wish" implies a desire. I am trying to explain that</p> <p>24 other than in the use of "wish" in the header here, I am</p> <p>25 attempting to describe behaviors that exchanges have</p>
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<p>1 withholding market data. These manipulations would</p> <p>2 undermine the transparency and fairness of the auction</p> <p>3 process, disadvantaging both advertisers and</p> <p>4 publishers."</p> <p>5 Q. Has Data Insights ever had an exchange as a</p> <p>6 client?</p> <p>7 A. Not as a direct client, no.</p> <p>8 Q. Has an exchange, online ad exchange, ever paid</p> <p>9 Data Insights in exchange for services?</p> <p>10 A. Not directly.</p> <p>11 Q. Every practice you list on the exchange wish</p> <p>12 list is one that you find to be unethical, right?</p> <p>13 A. Yes. On the buy side and sell side, I'm</p> <p>14 describing information that those entities would like to</p> <p>15 have in order to operate in an exchange more</p> <p>16 effectively.</p> <p>17 For the exchanges, I am describing</p> <p>18 manipulations generally to the auction process that</p> <p>19 undermine the fairness and transparency of the auctions</p> <p>20 on that exchange.</p> <p>21 Q. So you believe that if ad buyers and sellers</p> <p>22 had their way, they would want to do ethical things,</p> <p>23 right?</p> <p>24 MR. RENARD: Objection to form.</p> <p>25 THE WITNESS: In my experience in the</p>	<p>1 available to them as part of their position in the</p> <p>2 marketplace.</p> <p>3 BY MR. ROSSON:</p> <p>4 Q. Are you offering any opinions on Google's</p> <p>5 subjective intent?</p> <p>6 MR. RENARD: Objection to form.</p> <p>7 THE WITNESS: There are places where I cite to</p> <p>8 Google employees discussing their desired outcomes from</p> <p>9 experiments and behaviors that they engage in. And so</p> <p>10 in that sense, I think I am perhaps offering opinions on</p> <p>11 their subjective intent.</p> <p>12 BY MR. ROSSON:</p> <p>13 Q. What about the subjective intent of Google,</p> <p>14 the Defendant?</p> <p>15 MR. RENARD: Objection to form.</p> <p>16 THE WITNESS: I'm not offering an opinion on</p> <p>17 the subjective intent of Google the company.</p> <p>18 MR. ROSSON: So I think we're a little over an</p> <p>19 hour. Do you guys want to take a quick break?</p> <p>20 MR. RENARD: Sure.</p> <p>21 THE VIDEOGRAPHER: Okay. That concludes</p> <p>22 Media 7. We are going off the record at 6:28 p.m.</p> <p>23 (RECESS TAKEN)</p> <p>24 THE VIDEOGRAPHER: This is the start of</p> <p>25 Media 8. We are going back on the record at 6:49 p.m.</p>

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<p style="text-align: right;">Page 278</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. Dr. Chandler, any testimony you want to</p> <p>3 correct or change?</p> <p>4 A. No.</p> <p>5 Q. Can a publisher choose to use AdX without</p> <p>6 using DFP?</p> <p>7 A. Yes, it is possible for a publisher to use AdX</p> <p>8 without using Google Ad Manager.</p> <p>9 Q. Can a publisher choose to use DFP without</p> <p>10 using AdX?</p> <p>11 A. Yes.</p> <p>12 MR. ROSSON: I pass the witness.</p> <p>13 EXAMINATION</p> <p>14 BY MR. RENARD:</p> <p>15 Q. Dr. Chandler, I have a few questions and</p> <p>16 matters of clarification.</p> <p>17 Do you recall the questions that Mr. Rosson</p> <p>18 asked you today regarding your opinions in your June 7</p> <p>19 opening report, which is Exhibit No. 1?</p> <p>20 A. Yes.</p> <p>21 Q. Was any of your testimony today, other than</p> <p>22 the errata matters that Mr. Rosson covered with you at</p> <p>23 the beginning, was any of your testimony today intended</p> <p>24 to change the opinions expressed in your opening report?</p> <p>25 A. No.</p>	<p style="text-align: right;">Page 280</p> <p>1 the Ad Tech industry as set forth in your opening</p> <p>2 report?</p> <p>3 A. Yes.</p> <p>4 Q. Can you tell us whether or not that</p> <p>5 methodology that you utilized was based on reliable and</p> <p>6 generally accepted data analytics principles?</p> <p>7 A. Yes.</p> <p>8 Q. And was it?</p> <p>9 A. It was indeed.</p> <p>10 Q. Can that methodology be tested?</p> <p>11 A. Yes.</p> <p>12 Q. Has the methodology that you utilized and</p> <p>13 described in your deposition today been the subject of</p> <p>14 peer review and publication?</p> <p>15 A. It has.</p> <p>16 MR. ROSSON: Objection. Form.</p> <p>17 BY MR. RENARD:</p> <p>18 Q. Is that methodology generally accepted in the</p> <p>19 field of data analytics to the Ad Tech industry?</p> <p>20 MR. ROSSON: Objection. Form.</p> <p>21 THE WITNESS: Yes.</p> <p>22 BY MR. RENARD:</p> <p>23 Q. Did you reliably apply that methodology to</p> <p>24 form your opinions about the Ad Tech industry in this</p> <p>25 case?</p>
<p style="text-align: right;">Page 279</p> <p>1 Q. Was any of your testimony today intended to</p> <p>2 limit the opinions expressed in your opening report,</p> <p>3 Exhibit 1?</p> <p>4 A. No.</p> <p>5 Q. Similar questions with respect to your</p> <p>6 rebuttal report.</p> <p>7 Do you recall the questions that Mr. Rosson</p> <p>8 asked regarding your opinions set forth in your</p> <p>9 September 9 rebuttal, which is Exhibit No. 2?</p> <p>10 A. Yes.</p> <p>11 Q. Was any of your testimony today intended to</p> <p>12 change the opinions expressed in that rebuttal report?</p> <p>13 A. No.</p> <p>14 Q. Was any of your testimony today intended to</p> <p>15 limit the opinions expressed in Exhibit 2, the rebuttal</p> <p>16 report?</p> <p>17 A. No.</p> <p>18 Q. Can you tell us whether or not you had</p> <p>19 sufficient facts and data to reach your opinions that</p> <p>20 are set forth and expressed in your two reports in this</p> <p>21 case?</p> <p>22 A. Yes, I had sufficient facts and data to reach</p> <p>23 my opinions for both my reports.</p> <p>24 Q. Do you recall being asked today about the</p> <p>25 methodology that you used in forming your opinions on</p>	<p style="text-align: right;">Page 281</p> <p>1 A. Yes.</p> <p>2 Q. Did you have sufficient facts and data to</p> <p>3 reach the opinions you did in this case about the</p> <p>4 Ad Tech industry?</p> <p>5 A. Yes.</p> <p>6 Q. And similarly, did you have and do you have</p> <p>7 sufficient facts and data to reach the opinions</p> <p>8 expressed within your two reports in this case?</p> <p>9 A. Yes.</p> <p>10 Q. Are you offering any new opinions beyond those</p> <p>11 set forth in Exhibit 1 and Exhibit 2, which are your</p> <p>12 opening report and your rebuttal report, respectively?</p> <p>13 Are you offering any new opinions in addition to those</p> <p>14 set forth in those reports here today?</p> <p>15 A. I am not offering any new opinions beyond</p> <p>16 those in Exhibit 1 and Exhibit 2.</p> <p>17 Q. Do you remember when you were asked whether</p> <p>18 the advertising industry generally expects that when</p> <p>19 commercial parties enter into written transaction, that</p> <p>20 it's fair to hold them to their bargain?</p> <p>21 A. Yes.</p> <p>22 Q. Can you tell us whether or not in providing</p> <p>23 the answer that you provided, you were envisioning</p> <p>24 contracts among parties with vastly different bargaining</p> <p>25 power?</p>

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<p style="text-align: right;">Page 282</p> <p>1 MR. ROSSON: Objection. Form.</p> <p>2 THE WITNESS: I was not envisioning contracts</p> <p>3 between parties with vastly different bargaining power.</p> <p>4 BY MR. RENARD:</p> <p>5 Q. In your experience representing and advising</p> <p>6 advertisers and publishers and other players in the Ad</p> <p>7 Tech industry, did you develop a sense of whether Google</p> <p>8 has unequal bargaining power in negotiations regarding</p> <p>9 the Ad Tech industry?</p> <p>10 MR. ROSSON: Objection. Form.</p> <p>11 THE WITNESS: Yes, I developed an -- a sense,</p> <p>12 and I believe that Google does have unequal bargaining</p> <p>13 power in negotiations in the Ad Tech industry.</p> <p>14 BY MR. RENARD:</p> <p>15 Q. Unequal in what direction?</p> <p>16 A. Google has vastly more power than the parties</p> <p>17 it's negotiating with.</p> <p>18 Q. Dr. Chandler, just because some of Google's</p> <p>19 conducts discussed in your report may have ceased, does</p> <p>20 that mean in your opinion that those conducts no longer</p> <p>21 have adverse effects or can cause harm?</p> <p>22 A. No. Conducts that have ceased can still have</p> <p>23 adverse effects and can still cause harm.</p> <p>24 Q. Do you recall your testimony with respect to</p> <p>25 your reliance on Dr. Weinberg's opening report?</p>	<p style="text-align: right;">Page 284</p> <p>1 asked whether you were offering opinion on whether</p> <p>2 Google violated any deceptive trade practices of law,</p> <p>3 and your answer being no?</p> <p>4 A. I do remember that.</p> <p>5 Q. Are you saying that your opinions have no</p> <p>6 application or relevance with respect to the Plaintiff's</p> <p>7 deceptive trade practices claims in this case?</p> <p>8 MR. ROSSON: Objection. Form.</p> <p>9 THE WITNESS: I am not saying that.</p> <p>10 BY MR. RENARD:</p> <p>11 Q. Let me ask you a similar question with respect</p> <p>12 to the questions that Mr. Rosson asked you, whether your</p> <p>13 opinions -- whether you have any opinions on whether</p> <p>14 Google violated the antitrust laws. And I believe your</p> <p>15 answer was no, correct?</p> <p>16 A. That's correct.</p> <p>17 Q. Are you saying that your opinions do not have</p> <p>18 any application or relevance to the Plaintiff's</p> <p>19 antitrust claims against Google in this case?</p> <p>20 A. That is not what I'm saying.</p> <p>21 Q. If you'll pull out Exhibit 3, Chandler</p> <p>22 Exhibit 3. I have just a couple questions about that.</p> <p>23 Do you remember being shown Exhibit 3 and</p> <p>24 asked a series of questions about it?</p> <p>25 A. Yes.</p>
<p style="text-align: right;">Page 283</p> <p>1 A. I do.</p> <p>2 Q. By the way, have you read Dr. Weinberg's</p> <p>3 rebuttal report?</p> <p>4 A. I have.</p> <p>5 Q. Can you tell us whether or not one of the</p> <p>6 reasons that you partially relied on Dr. Weinberg's</p> <p>7 report was that it contained an accurate and detailed</p> <p>8 description of Google's conducts?</p> <p>9 MR. ROSSON: Objection. Form.</p> <p>10 THE WITNESS: Yes. One of the reasons I</p> <p>11 relied partially on Dr. Weinberg's report is because it</p> <p>12 contained an accurate and detailed description of</p> <p>13 Google's conducts.</p> <p>14 BY MR. RENARD:</p> <p>15 Q. Can you tell us whether or not beyond your</p> <p>16 reliance on Dr. Weinberg, partial reliance, whether you</p> <p>17 also have an independent understanding of Google's</p> <p>18 conducts?</p> <p>19 A. I do have an independent understanding of</p> <p>20 Google's conducts.</p> <p>21 Q. And since the time of your opening report, did</p> <p>22 you further study and develop an even deeper</p> <p>23 understanding of those conducts?</p> <p>24 A. I did.</p> <p>25 Q. Dr. Chandler, do you remember when you were</p>	<p style="text-align: right;">Page 285</p> <p>1 Q. Do you know if that document was ever posted</p> <p>2 publicly? And by that, I mean shared with auction</p> <p>3 participants generally.</p> <p>4 A. I do not know.</p> <p>5 Q. And do you know the date of that document, if</p> <p>6 in fact it was ever posted publicly?</p> <p>7 A. I do not know the date.</p> <p>8 Q. Do you know the form of the medium in which</p> <p>9 that document was posted publicly, if it was at all?</p> <p>10 A. I do not know.</p> <p>11 Q. Does the statement in Exhibit 3 that "Google</p> <p>12 may run limited experiments" constitute, in your</p> <p>13 opinion, an accurate, full, effective, and timely</p> <p>14 disclosure?</p> <p>15 A. It does not.</p> <p>16 Q. Would that -- those statements constitute a</p> <p>17 factually accurate and full, effective, and timely</p> <p>18 disclosure of Bernanke or any of the versions thereof?</p> <p>19 MR. ROSSON: Objection. Form.</p> <p>20 THE WITNESS: No.</p> <p>21 BY MR. RENARD:</p> <p>22 Q. Would it, in your opinion, constitute a full,</p> <p>23 effective, accurate, and timely disclosure of Dynamic</p> <p>24 Revenue Sharing, DRS?</p> <p>25 A. No.</p>

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<p>1 Q. Would it, in your opinion, constitute a</p> <p>2 factually accurate, full, effective, and timely</p> <p>3 disclosure of Reserve Price Optimization, RPO?</p> <p>4 A. No.</p> <p>5 Q. You testified -- and let's take a look, sir,</p> <p>6 then, at Chandler Exhibit 4.</p> <p>7 Do you recall being asked a series of</p> <p>8 questions about it?</p> <p>9 A. Yes.</p> <p>10 Q. You testified, did you not, that you had no</p> <p>11 reason to doubt the veracity of certain statements in</p> <p>12 Exhibit 4?</p> <p>13 A. I did testify to that.</p> <p>14 Q. Let me ask you: Based upon your analysis of</p> <p>15 certain Google internal communications, has Google</p> <p>16 previously made untrue statements --</p> <p>17 A. Yes.</p> <p>18 Q. -- in its public-facing communications?</p> <p>19 MR. ROSSON: Objection. Form.</p> <p>20 THE WITNESS: Yes.</p> <p>21 BY MR. RENARD:</p> <p>22 Q. Do you remember when Mr. Rosson asked you</p> <p>23 about experiments that advertisers and publishers run?</p> <p>24 A. Yes.</p> <p>25 Q. Is it your opinion that the experiments run by</p>	<p>1 A. Yes.</p> <p>2 Q. Do you recall your testimony was that as of</p> <p>3 this lawsuit, Bernanke has been generally disclosed to</p> <p>4 the industry?</p> <p>5 A. Yes.</p> <p>6 Q. What did you mean by "generally"?</p> <p>7 A. I meant that the industry was aware of the</p> <p>8 general concept of Bernanke. And I did not mean that</p> <p>9 the industry was aware of the specifics of Bernanke that</p> <p>10 I have learned about from my review of confidential</p> <p>11 documents.</p> <p>12 Q. Do you remember when you were asked if any</p> <p>13 publishers or advertisers had decided not to advertise</p> <p>14 on AdX because of Bernanke?</p> <p>15 A. Yes.</p> <p>16 Q. In your experience within the industry, do you</p> <p>17 believe that there are viable alternatives to AdX such</p> <p>18 that an advertiser or publisher could stop using AdX</p> <p>19 altogether?</p> <p>20 MR. ROSSON: Objection. Form.</p> <p>21 THE WITNESS: No.</p> <p>22 BY MR. RENARD:</p> <p>23 Q. Do you remember being asked about Footnote 9</p> <p>24 of your report?</p> <p>25 A. Yes.</p>
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<p>1 advertisers and publishers that are discussed in your</p> <p>2 report are the same type of experiments that Google was</p> <p>3 running as you describe in your reports?</p> <p>4 A. No, it is not my opinion that the experiments</p> <p>5 run by advertisers and publishers are the same type of</p> <p>6 experiments that Google runs.</p> <p>7 Q. Let me now move away from type to scale.</p> <p>8 Is it your opinion that Google was running the</p> <p>9 same scale of experiments as those experiments to which</p> <p>10 you refer that are conducted or have been conducted by</p> <p>11 advertisers and publishers in the Ad Tech industry?</p> <p>12 A. No. The scale of Google's experiments was</p> <p>13 vastly larger.</p> <p>14 Q. Do you remember the question from Mr. Rosson</p> <p>15 asking whether advertiser experiments changed auctions?</p> <p>16 A. Yes.</p> <p>17 Q. And your testimony was, was it not, that no</p> <p>18 advertiser had the scale to do so; is that correct?</p> <p>19 A. That is correct.</p> <p>20 Q. Let me ask you: Did Google have the scale</p> <p>21 necessary to affect the outcome of auctions?</p> <p>22 A. Google did have the scale necessary to run</p> <p>23 experiments that would affect the outcome of auctions.</p> <p>24 Q. Do you remember when you were asked if</p> <p>25 Bernanke has been disclosed today?</p>	<p>1 Q. Does Footnote 9, and the definition that you</p> <p>2 provide, represent your expert opinion in this matter?</p> <p>3 A. Yes, it does.</p> <p>4 Q. If you would turn, sir, to Exhibit 1, which is</p> <p>5 your opening statement. I'm sorry, opening report.</p> <p>6 A. [Witness complies.]</p> <p>7 Q. And if we can go to Page -- we'll start at</p> <p>8 Page 86. Let me know when you're there.</p> <p>9 A. I'm there.</p> <p>10 Q. And do you recall being -- or providing</p> <p>11 testimony about what your purpose was in setting forth</p> <p>12 "The Buy Side Wish List," which is Section G,</p> <p>13 Subsection 1 on Page 86, and Section G.2, "The Sell Side</p> <p>14 Wish List," which is on Page 87?</p> <p>15 A. Yes.</p> <p>16 Q. I'd like to turn to the third subsection,</p> <p>17 which is on Page 88.</p> <p>18 Do you recall testifying about what the</p> <p>19 purpose of that section was?</p> <p>20 A. Yes.</p> <p>21 Q. I'd like to direct your attention,</p> <p>22 Dr. Chandler, to Paragraph 332. Would you read into the</p> <p>23 record your second sentence of that paragraph?</p> <p>24 A. "This subsection explores the types of</p> <p>25 information that exchanges could exploit with access to</p>

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<p style="text-align: right;">Page 290</p> <p>1 data that exchanges typically do not have or if the</p> <p>2 exchanges were willing to manipulate their auctions."</p> <p>3 Q. Does that sentence fairly capture the purpose</p> <p>4 and intent of Subsection 3 of Section G, which is on</p> <p>5 Pages 88 and 89 of your opening report?</p> <p>6 A. It does.</p> <p>7 MR. RENARD: No further questions.</p> <p>8 EXAMINATION</p> <p>9 BY MR. ROSSON:</p> <p>10 Q. Dr. Chandler, did I hear you correctly that</p> <p>11 the opinions you're offering in this case are entirely</p> <p>12 contained in your opening and rebuttal report?</p> <p>13 A. Yes.</p> <p>14 Q. Do your opening and rebuttal reports mention a</p> <p>15 disparity of bargaining power at all?</p> <p>16 A. They do not specifically mention disparity of</p> <p>17 bargaining power.</p> <p>18 Q. [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 MR. RENARD: Objection. I believe that's</p> <p>21 outside the scope of my examination.</p> <p>22 Objection to the form.</p> <p>23 THE WITNESS: [REDACTED]</p> <p>24 [REDACTED]</p> <p>25</p>	<p style="text-align: right;">Page 292</p> <p>1 record, we will want the opportunity to review the</p> <p>2 transcript and sign, if necessary.</p> <p>3 Thank you all.</p> <p>4 THE VIDEOGRAPHER: Okay.</p> <p>5 We are off the record at 7:06 p.m. This</p> <p>6 concludes today's testimony given by John Chandler. The</p> <p>7 total number of media used was eight and will be</p> <p>8 retained by Veritext.</p> <p>9 (Signature was reserved.)</p> <p>10 (Thereupon, the deposition</p> <p>11 concluded at 7:06 p.m.)</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
<p style="text-align: right;">Page 291</p> <p>1 BY MR. ROSSON:</p> <p>2 Q. [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 A. As it relates to open web display, I think</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 Q. [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 MR. RENARD: Objection to form.</p> <p>10 THE WITNESS: [REDACTED]</p> <p>11 BY MR. ROSSON:</p> <p>12 Q. [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 A. As it relates to open web display, yes.</p> <p>15 Q. If I want to learn more about how you</p> <p>16 determine whether there's a disparity of bargaining</p> <p>17 power between two companies, can I look in your report</p> <p>18 and find any analysis about that?</p> <p>19 A. I don't believe my report contains information</p> <p>20 about disparity of bargaining power specifically.</p> <p>21 MR. ROSSON: I pass the witness.</p> <p>22 MR. RENARD: No further questions.</p> <p>23 MR. ROSSON: We'll designate the transcript</p> <p>24 confidential.</p> <p>25 MR. RENARD: Also, before we go off the</p>	<p style="text-align: right;">Page 293</p> <p>1 CERTIFICATE OF REPORTER</p> <p>2 STATE OF MONTANA)</p> <p>3 :</p> <p>4 COUNTY OF GALLATIN)</p> <p>5 I, Emily K. Niles, Registered Merit Reporter,</p> <p>6 do hereby certify: That I reported the deposition of</p> <p>7 DR. JOHN CHANDLER, Ph.D., commencing on Thursday,</p> <p>8 October 24, 2024, at 8:15 a.m.;</p> <p>9 That prior to being deposed, the witness was</p> <p>10 duly sworn by me to testify to the truth;</p> <p>11 That the reading and signing of the deposition</p> <p>12 by the witness have been expressly reserved;</p> <p>13 That I foregoing pages of this deposition</p> <p>14 constitute a complete, true, and accurate transcription</p> <p>15 of my stenotype notes of the testimony of said witness</p> <p>16 to the best of my ability.</p> <p>17 I further certify that I am not a relative or</p> <p>18 employee of counsel of any of the parties, nor a</p> <p>19 relative or employee of the parties involved in said</p> <p>20 action, nor a person financially interested in the</p> <p>21 action.</p> <p>22 IN WITNESS WHEREOF, I have set my hand in my</p> <p>23 office in the County of Gallatin, State of Montana, this</p> <p>24 25th day of October, 2024.</p> <p>25</p> <p>EMILY K. NILES, RMR, CRR, CCR #782</p>

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<p>1 JAMES S. RENARD, ESQ. 2 james.renard@nortonrosefulbright.com 3 October 25, 2024 4 RE: State Of Texas Et Al v. Google LLC 5 10/24/2024, John Chandler (#6918917) 6 The above-referenced transcript is available for 7 review. 8 Within the applicable timeframe, the witness should 9 read the testimony to verify its accuracy. If there are 10 any changes, the witness should note those with the 11 reason, on the attached Errata Sheet. 12 The witness should sign the Acknowledgment of 13 Deponent and Errata and return to the deposing attorney. 14 Copies should be sent to all counsel, and to Veritext at 15 erratas-cs@veritext.com. 16 Return completed errata within 30 days from 17 receipt of testimony. 18 If the witness fails to do so within the time 19 allotted, the transcript may be used as if signed. 20 21 22 Yours, 23 Veritext Legal Solutions 24 25</p>	<p>1 State Of Texas Et Al v. Google LLC 2 John Chandler (#6918917) 3 ACKNOWLEDGEMENT OF DEPONENT 4 I, John Chandler, do hereby declare that I 5 have read the foregoing transcript, I have made any 6 corrections, additions, or changes I deemed necessary as 7 noted above to be appended hereto, and that the same is 8 a true, correct and complete transcript of the testimony 9 given by me. 10 11 _____ 12 John Chandler Date 13 *If notary is required 14 SUBSCRIBED AND SWORN TO BEFORE ME THIS 15 _____ DAY OF _____, 20____. 16 17 18 _____ 19 NOTARY PUBLIC 20 21 22 23 24 25</p>
<p>Page 295</p> <p>1 State Of Texas Et Al v. Google LLC 2 John Chandler (#6918917) 3 E R R A T A S H E E T 4 PAGE____ LINE____ CHANGE_____ 5 _____ 6 REASON_____ 7 PAGE____ LINE____ CHANGE_____ 8 _____ 9 REASON_____ 10 PAGE____ LINE____ CHANGE_____ 11 _____ 12 REASON_____ 13 PAGE____ LINE____ CHANGE_____ 14 _____ 15 REASON_____ 16 PAGE____ LINE____ CHANGE_____ 17 _____ 18 REASON_____ 19 PAGE____ LINE____ CHANGE_____ 20 _____ 21 REASON_____ 22 _____ 23 _____ 24 John Chandler Date 25</p>	

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1 CERTIFICATE OF REPORTER

2 STATE OF MONTANA)
3 COUNTY OF GALLATIN)

4 I, Emily K. Niles, Registered Merit Reporter,
5 do hereby certify: That I reported the deposition of
6 DR. JOHN CHANDLER, Ph.D., commencing on Thursday,
7 October 24, 2024, at 8:15 a.m.;

8 That prior to being deposed, the witness was
9 duly sworn by me to testify to the truth;

10 That the reading and signing of the deposition
11 by the witness have been expressly reserved;

12 That I foregoing pages of this deposition
13 constitute a complete, true, and accurate transcription
14 of my stenotype notes of the testimony of said witness
15 to the best of my ability.

16 I further certify that I am not a relative or
17 employee of counsel of any of the parties, nor a
18 relative or employee of the parties involved in said
19 action, nor a person financially interested in the
20 action.

21 IN WITNESS WHEREOF, I have set my hand in my
22 office in the County of Gallatin, State of Montana, this
23 25th day of October, 2024.

24
25



EMILY K. NILES, RMR, CRR, CCR #782